

VCS & CCB 1ST VERIFICATION REPORT FOR QIANBEI AFFORESTATION PROJECT



Document Prepared by Shenzhen CTI International Certification Co., Ltd (CTI)

Project Title	Qianbei Afforestation Project
Version	01
Report ID	CTI/NB-2019-1205

Report Title	VCS & CCB 1 st Verification Report for Qianbei Afforestation Project
Client	Shanghai Libra Investment & Management Co., Ltd
Pages	76
Date of Issue	20-October-2020
Prepared By	Shenzhen CTI International Certification Co., Ltd
Contact	Shenzhen CTI International Certification Co., Ltd F8-A CTI Building, No.4 LiuXianSan Road, Xin'an Street Bao'an District, Shen Zhen 518101, P. R. China Phone: +86-10-65580012 https://www.cti-cert.org/
Approved By	Zhou Lu
Work Carried Out By	Lin Shunrong (TL) Yan Shun (TE) Wang Guolian (TR)

Summary

- **A brief description of the verification and the project.**

The project activity developed in Bozhou district, Tongzhi county, Suiyang county, Zheng'an county, Daozhen county, Wuchuan county, Meitan county and Xishui county, Zunyi City, Guizhou Province, P. R. China, is afforestation of barren or degraded lands, which would continue to remain barren or degraded in the absence of the project activity, by direct planting native trees (China fir, Cypress, Pinus yunnanensis and Masson pine). The project not only sequester carbon through biomass growth but also provide native habitat for numerous species and provide employment for local workers in the adjoining forest management activities. The planted area accounts to 50,061 ha of forest. The project started planting on 30-April-2015 and GHG accounting period was chosen by PP started from 01-January-2016 and it was registered by VCS under Project ID 2082 in conjunction with the Climate, Community and Biodiversity Standard (CCBS).

- **The purpose and scope of verification.**

The objective of the verification is to have an independent review ex post determination by a VVB (Validation and Verification Body) of the monitored GHG removals by sink that have occurred as a result of the implementation of the project activity during a defined monitoring period.

- **The monitoring period.**

This is the first Monitoring period started from 01-January-2016 to 31-December-2019.

- **The method and criteria used for verification.**

Verification is conducted by Shenzhen CTI International Certification Co., Ltd following the requirements specified in the latest version of the VCS Validation and Verification Manual and applying auditing techniques. The verification team assessed the project activity's compliance against the VCS Version 4.0, the CCB Standard Third Edition (version 3.1), the selected methodology and the project monitoring report. The project is eligible under Project Scope 14. The verification criteria followed the guidance documents provided by VCS and CCB included the following:

- VCS Standard Version 4.0,
- VCS Program Guide Version 4.0,
- AFOLU Non-Permanence Risk Tool Version 4.0,
- CCB Standards version 3.1,
- CCB Program Rules version 3.1
- CDM Methodology AR-ACM0003 version 2.0.0 – "Afforestation and reforestation of lands except wetlands".

- **The number of findings raised during verification.**

In the course of the verification, 10 Corrective Action Requests (CARs), 6 Clarification Requests (CLs) were raised and successfully closed. The assessment is included in the report.

- **Any uncertainties associated with the verification.**

There are no restrictions of uncertainty.

- **Summary of the verification conclusion.**

Shanghai Libra Investment & Management Co., Ltd has commissioned the Shenzhen CTI International Certification Co., Ltd to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 1st periodic verification of the project, "Qianbei Afforestation Project" (PL2082) with

regard to the relevant requirements of VCS standard Version 4.0 and CCB Standards version 3.1.

CTI confirms all verification activities including objectives, scope and criteria, level of assurance, monitoring and monitoring report adhere to VCS Version 4.0 and CCB Standards version 3.1 and all associated updated as documented in this report, are complete.

In conclusion, CTI confirms that the project activity “Qianbei Afforestation Project” in China, as described in the Monitoring Report version 02 of 18-October-2020, meets all relevant requirements for VCS and CCB verification activity and correctly applied the methodology AR-ACM0003 version 2.0.0. Hence CTI is able to certify that the GHG removals by sink from the project during the monitoring period 01-January-2016 to 31-December-2019 amount to **930,831 tCO₂e**.

Table of Contents

1. Introduction	5
1.1 Objective	5
1.2 Scope and Criteria	5
1.3 Level of Assurance	5
1.4 Summary Description of the Project	6
2. Verification Process	7
2.1 Audit Team Composition (<i>Rules 4.3.1</i>)	7
2.2 Method and Criteria	8
2.3 Document Review	9
2.4 Interviews	10
2.5 Site Inspections	12
2.6 Resolution of Findings	13
2.7 Eligibility for Validation Activities	14
3. Validation Findings	15
3.1 Participation under Other GHG Programs	15
3.2 Methodology Deviations	15
3.3 Project Description Deviations (<i>Rules 3.5.7 – 3.5.10</i>)	15
3.4 Minor Changes to Project Description (<i>Rules 3.5.6</i>)	15
3.5 Grouped Project (G1.13 – G1.15, G4.1)	15
4. Verification Findings	16
4.1 Public Comments (<i>Rules 4.6</i>)	16
4.2 Summary of Project Benefits	16
4.3 General	16
4.4 Climate	27
4.5 Community	48
4.6 Biodiversity	53
4.7 Additional Project Implementation Information	58
4.8 Additional Project Impact Information	58
5. Verification Conclusion	59
Appendix 1: Abbreviations	61
Appendix 2: Documents reviewed or referenced	62
Appendix 3: Clarification requests, corrective action requests and forward action requests	68

1. INTRODUCTION

1.1 Objective

Shanghai Libra Investment & Management Co., Ltd has commissioned the Shenzhen CTI International Certification Co., Ltd to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 1st periodic verification of the project for the monitoring period from 01-January-2016 to 31-December-2019. The objective of verification is to have an independent review ex-post determination by a DOE of the monitored GHG removals by sink that have occurred as a result of the project activity implemented during a defined monitoring period. The evaluation is done against the requirements of the VCS version 4.0 and CCBS third edition (version 3.1), based on the monitoring report. In order to confirm that the GHG removals by sink sound reasonable and meet the identified criteria, the verification involves the assessment of monitoring plan conformance to VCS/CCB rules and applied methodology. Verification is requirement and is seen as necessary to provide assurance on the generation of VCUs.

1.2 Scope and Criteria

The scope of the verification is to verify that: (a) the actual monitoring system and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; (b) the GHG removals by sink data and express a conclusion with a reasonable level of assurance about whether the reported GHG removals by sink data are free from material misstatement; (c) the reported GHG emissions data and impacts to community and biodiversity are sufficiently supported by evidence. Verification shall ensure that the reported GHG removals by sink and impacts to community and biodiversity are complete and accurate in accordance with the applicable VCS and CCB criteria in order to be certified. Verification is conducted by CTI following the requirements specified in the VCS Program, CCB standard and ISO14064-3 requirements and applying auditing techniques. Verification team assessed and determines that the implementation and operation of the project activity, and steps to report GHG removals by sink comply with the VCS rules, and steps to report impacts to community and biodiversity comply with the CCB Standard. The verification involved a document review of relevant documentation and interview with the project participants. Verification is not meant to provide any consultancy towards the project participants; however, stated request for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

1.3 Level of Assurance

All GHG sinks, sources and GHG emissions equal to or greater than 5% of the total GHG assertions are considered. The project area covers 50,061 ha and has generated average of 232,708 VCUs per year, and therefore can be considered as a normal project per the VCS rules for this monitoring period, in regards to its scale, subject to a 5% materiality threshold.

The assessment was conducted to provide a reasonable level of assurance of compliance against the defined audit criteria and materiality threshold within the audit scope. Based on the audit findings the verification statement reasonably assures that the GHG assertion is materially correct and is a fair representation of the GHG data and information.

1.4 Summary Description of the Project

The Qianbei Afforestation Project is implemented by Guizhou Xinzhanxin Agricultural Technology Co., Ltd. and it aims in afforestation of barren or degraded lands, which would continue to remain barren or degraded. The total area of the Project has an extension of 50,061 hectares and it is located inside the Bozhou district, Tongzhi county, Suiyang county, Zheng'an county, Daozhen county, Wuchuan county, Meitan county and Xishui county, Zunyi City, Guizhou Province, China.

The project zone consists of 1 district and 7 counties (Bozhou district, Tongzhi county, Suiyang county, Zheng'an county, Daozhen county, Wuchuan county, Meitan county and Xishui county) planted in different periods and four species have been chosen for the afforestation project: China fir, Cypressess, *Pinus yunnanensis* and Masson pine, all of them grew up successfully, which has been verified by on-site inspection and interview with the project implementer.

The project activity generates GHG removals by sink by changing the status of land from degraded and barren lands to sustainable forest production systems which increase the forest cover in the project region thus generating a typical landscape formed by biological and productive areas that produce financial, social and environmental benefits. The project has resulted in the benefits as described in Section 1 of the Monitoring Report. The project is registered under the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Standard (CCBS).

2. VERIFICATION PROCESS

2.1 Audit Team Composition (*Rules 4.3.1*)

Lead Auditor/VCS-CCB Validator: Lin Shunrong is qualified by CTI in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB and SD. She has experience with more than 100 validation and verification projects including CDM, VS and GS projects involved in renewal energy and agriculture sectors. She has a bachelor degree of Horticulture and master degree of International Agriculture Development. Thus, she has the relevant social and cultural expertise in this region and also have relevant ecological and biodiversity experience due to the education background. She speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

Technical Expert: Yan Shun has Bachelor degree in Plant Protection, and work experience more than 20 years as a stationmaster in plant protection, cultivation, and agriculture technology extension station, qualified by CTI in Scope 14. Thus he has the relevant agriculture, forestry and or other land use experience in China due to education background and working experience. He speaks mandarin which is the common language in China and the regional residents can speak and understand this language.

The verification team member and technical reviewer composition are listed in the below tables,

Table 2-1 Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/Doc review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader (also verifier)	IR	LIN	Shunrong	CTI	☒	☒	☒	☒
2.	Technical expert	OR	YAN	Shun	Xianfeng County Agricultural Technology Extension Station	☒	☒	☒	☒

Table 2-2 Technical reviewer and approver

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	WANG	Guolian	CTI
2.	Approver	IR	ZHOU	Lu	CTI

2.2 Method and Criteria

A project specific Verification and Sampling plan was developed to guide the verification auditing process to ensure efficiency and effectiveness. The purpose of the verification and sampling plan is to present a risk assessment for determining the nature and extent of validation procedures necessary to ensure the risk of auditing error is reduced to a reasonable level. According to the ISO14064-3, the criteria are the policy, procedure or requirement used as reference against which evidence is compared. Therefore verification of the monitoring plan and the reported project results were measured for compliance against the following criteria:

- VCS Standard, v4.0/52/
- VCS Program Guide, v4.0/51/
- VCS Program Definitions, v4.0/50/
- VCS AFOLU Non-Permanence Risk Tool, v4.0/49/
- CCB Climate, Community & Biodiversity Standards/56/
- CCB Program Rules, v3.1/55/
- CDM methodological tool Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (Version 04.2)/46/

The verification process derived from all items in the verification criteria stated above. Field sampling and techniques based on the project parameters, scope and best professional judgment of the verification team in order to meet a reasonable level of assurance. The verification method of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the VCS&CCB Monitoring Report (VCS&CCB MR)/1/
- A desk review of the VCS&CCB MR/1/ submitted by the client and additional supporting documents with the use of customised validation documents checklist
- Verification planning
- On-Site assessment
- Sample plots investigation and follow-up interviews with personnel of the project developer and local stakeholders
- Draft verification reporting
- Resolution of Corrective Action Requests (CARs) and Clarification Requests (CLs)
- Final verification reporting
- Technical review
- Final approval of the verification.

The verification process derived from all items in the verification criteria stated above. Field sampling and techniques based on the project parameters, scope and best professional judgement of the verification team in order to meet a reasonable level of assurance.

The sampling plan during on-site verification is determined taking into account the accessibility and similitude of the areas and the tool for sampling was referred by verification team for the site verification.

The sampling design (number of plot, location) is considered to be in line with the requirements for validation (IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12. : $x = \sqrt{y}$, where x is the sampling size by verification team and y is the sample plots number determined by PP in MR), and it has ensured a representative cross-section of the properties in the areas.

Sample plots selected by VVB is calculated as below,

Stratum 1, number of plots y is 11. $X = \sqrt{11} = 4$

Stratum 2, number of plots y is 5. $X = \sqrt{5} = 3$

Stratum 3, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 4, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 5, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 6, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 7, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 8, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 9, number of plots y is 3. $X = \sqrt{3} = 2$

Stratum 10, number of plots y is 3. $X = \sqrt{3} = 2$

A ground inspection of the project area was conducted during the site visit and members of the verification team visited 23 sample plots within the project area.

During site visit, by sample plots observation and inspection, the verification team measured the sample plot diameter and area, counted the number of the trees inside plot, measured the DBH and height of the trees inside plot, and confirmed that the value of all trees from PP sampling data are correct and reasonable, hence CTI verified that the calculation method used in the MR is correct and actual.

2.3 Document Review

The VCS&CCB MR/1/ and supporting background documents related to the project implementation and carbon sink, climate, community, biodiversity change monitoring were reviewed. Documents review was conducted to ensure consistency with and identify any deviation from VCS and CCB program requirements. Desk review included an examination of the project details, data and parameters, and quantification of GHG removals.

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the monitoring or to the basic conditions and technical data.

The references used in the course of this verification are summarized in Appendix 2.

The verification was performed basing on the documents check and site inspection/measurements, refer to the section 4 of this report for the verification process detail and corresponding documents review.

2.4 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the verification process. Onsite interviews and information discussions were conducted with project implementer/I1/, local government officer/I2/, local residents/I3/ and Project VCS&CCB development consultant/I4/. The interviews were performed by the verification team on-site (within the project area, in Bozhou district, Tongzhi county, Suiyang county, Zheng'an county, Daozhen county, Wuchuan county, Meitan county and Xishui county, Zunyi City, Guizhou Province, China) and the following is a list of the main interviewees and subject.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Zhang ^{/I1/}	Heng	Guizhou Xinzhanxin Agricultural Technology Co., Ltd/ Project Manager	27/09/2020~30/09/2020	-Chronological description of the project activity with documents of key steps of the implementation. -Technical details of the project realization, project feasibility, designing, operational life time -Baseline and Additionality -Project Boundary -Eligibility criteria -ER calculation - Monitoring plan and arrangements -Crediting period -Project activity starting date -Ownership -local stakeholder consultation	Lin Shunrong Yan Shun
2.	Liu ^{/I2/}	Zhixin	Bozhou District Forestry Bureau/ Forest Section Staff	27/09/2020	-National legislation to forest - Provincial legislation to afforestation -Local forestry development	Lin Shunrong Yan Shun
3.	Chen ^{/I2/}	Jinyu	Tongzi County Forestry Bureau/ Forest Section Staff	27/09/2020	- Roles & responsibilities of the government -local communities changed by the	

4.	Zhang ^{/12/}	Nan	Suiyang County Forestry Bureau/ Forest Section Staff	27/09/2020	project -local biodiversity situation changed by the project -local climate -local environment changed by the project	
5.	Tao ^{/12/}	Dong	Zheng'an County Forestry Bureau/ Forest Section Staff	27/09/2020		
6.	Xia ^{/12/}	Guilei	Daozhen County Forestry Bureau/ Forest Section Staff	27/09/2020		
7.	Yu ^{/12/}	Wenfu	Wuchuan County Forestry Bureau/ Forest Section Staff	27/09/2020		
8.	Jia ^{/12/}	Zi	Meitan County Forestry Bureau/ Forest Section Staff	27/09/2020		
9.	Wang ^{/12/}	Yu	Xishui County Forestry Bureau/ Forest Section Staff	27/09/2020		
10.	Sun ^{/13/}	Jiao	Datian Village/ Resident/ worker as forest technician	27/09/2020	-job opportunities -living condition -training -local stakeholder consultation -impact to local residents during this MP	
11.	Zhao ^{/13/}	Xinyi	Qingfeng Village / Resident	27/09/2020	-impact to local environment during this MP	
12.	Qi ^{/13/}	Tianhang	Chaping Village/ Resident	27/09/2020	-impact to local biodiversity during this MP	
13.	Tang ^{/13/}	Lesheng	Heping Village/ Resident/ worker as forest technician	27/09/2020		Lin Shunrong Yan Shun

14.	Liu ^{/13/}	Linhai	Zetou Village/ Resident	27/09/2020		
15.	Xu ^{/13/}	Tianhua	Honghua Village/ Resident	27/09/2020		
16.	Zhang ^{/13/}	Yu	Shanyan Village/ Resident	27/09/2020		
17.	Li ^{/13/}	Muzi	Kanba Village / Resident/ worker as forest technician	27/09/2020		
18.	Wen ^{/13/}	Jiayan	Jingxin Village/ Resident	27/09/2020		
19.	Deng ^{/13/}	Jin	Gongnong Village/ Resident	27/09/2020		
20.	Lin ^{/13/}	Tianqiong	Dongshan Village / Resident/ worker as forest technician	27/09/2020		
21.	Wang ^{/13/}	Guanhong	Banzhu Village / Resident/ worker as forest technician	27/09/2020	-Financial aspects -Deviations -Monitoring period -Project activity starting date -Assumptions -Sampling plan and implementation -Monitoring measurements - Editorial issues of the VCS&CCB MR	Lin Shunrong Yan Shun
22.	Shen ^{/14/}	Keye	Shanghai Libra Investment & Managemen t Co., Ltd/ Technical Director	27/09/2020~ 30/09/2020		

2.5 Site Inspections

The verification site inspection was conducted on 27/09/2020~30/09/2020. A ground inspection of the project area was conducted during the site visit and members of the verification team visited 23 sample plots within the project area. During the site inspection the verification team was accompanied by the forest developer, local government officers, consultant and forest technicians.

During the site inspection, the 23 sample plots are determined by the verification team by checking the map of the project location and PP sampling plots inventory^{32/}, details as following table,

Table 2-1 Locations for site inspection

Site Visit time	Area	Sample No.	Coordinates		Inspection Results
27/09/2020	Strata 5	ID-S16	107°26'18"E	28°13'27"N	Refer to table 4-7 of this report for the measurement records conducted by verification team.
	Strata 6	ID-W13	107°54'42"E	28°57'52"N	
	Strata 1	ID-W5	107°39'47"E	28°30'08"N	
	Strata 1	ID-D19	107°43'38"E	28°43'22"N	
	Strata 1	ID-D7	107°44'49"E	28°45'11"N	
	Strata 5	ID-Z5	107°18'45"E	28°40'32"N	
28/09/2020	Strata 9	ID-T25	107°07'19"E	28°44'48"N	
	Strata 8	ID-T24	107°02'07"E	28°43'21"N	
	Strata 9	ID-T7	106°47'30"E	28°10'24"N	
	Strata 2	ID-T9	106°53'39"E	28°08'36"N	
	Strata 10	ID-T10	106°48'25"E	28°08'44"N	
	Strata 10	ID-X10	106°24'33"E	28°23'26"N	
29/09/2020	Strata 7	ID-S4	107°06'27"E	28°18'50"N	
	Strata 4	ID-S25	107°05'02"E	28°26'55"N	
	Strata 1	ID-S31	107°20'51"E	28°09'45"N	
	Strata 2	ID-S33	107°21'10"E	27°12'03"N	
	Strata 4	ID-S36	107°16'58"E	27°53'27"N	
	Strata 3	ID-S37	107°12'32"E	27°53'11"N	
30/09/2020	Strata 6	ID-B13	106°58'46"E	27°21'06"N	
	Strata 8	ID-B15	106°56'31"E	27°22'29"N	
	Strata 3	ID-M19	107°28'36"E	27°50'07"N	
	Strata 2	ID-S11	107°01'44"E	28°14'19"N	
	Strata 7	ID-S14	107°09'08"E	28°04'16"N	

There are total 10 project stratifications for carbon calculation in the 1 district and 7 counties, the verification team visited targeted area for each project stratification, total 23 sample plots. Refer to the section 4.4.1 of this report for the details of the sampling approach conducted by the verification team during site inspection and refer to table 4-7 of this report for the details of the sampling results concluded by the verification team.

2.6 Resolution of Findings

Material discrepancies identified in the course of the validation are addressed either as CARs, CLs or FARs.

A Corrective Action Request (CAR) is established where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The VCS Version 4.0 requirements have not been met;
- The applied methodology and tools requirements have not been met;
- The CCBS third edition requirements have not been met;

- There is a risk that the emission reductions cannot be monitored or calculated.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

A detailed list of the CARs CLs and FAR raised and discussed in the course of this validation is included in Appendix 3 of this report.

In the course of the validation 10 Corrective Action Requests (CARs), 6 Clarification Requests (CLs) were raised and successfully closed. The assessment is included in the report.

2.6.1 Forward Action Requests

This is the first verification, and there is no FAR raised in the validation report^{7/}.

2.7 Eligibility for Validation Activities

The VVB Shenzhen CTI International Certification Co., Ltd hold accreditation for both validation and verification for the relevant sectoral scope 14.

As per the VCS standard, "Validation (including project crediting period renewal validation) and the first verification of a project (in a given project crediting period) may be undertaken by the same validation/verification body", this is the first verification after the project registration occurred in 2020 from which the validation was conducted by Shenzhen CTI International Certification Co., Ltd.

3. VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The verification team is not aware of project involvement in other forms of environmental credits from its activities. The project has not been registered, and is not seeking registration, under any other GHG programs.

3.2 Methodology Deviations

During the monitoring period, there are no methodology deviations

3.3 Project Description Deviations (*Rules 3.5.7 – 3.5.10*)

During the monitoring period, there is no project description deviations related to the changes to project description.

3.4 Minor Changes to Project Description (*Rules 3.5.6*)

During the monitoring period, there are no minor changes to project description.

3.5 Grouped Project (G1.13 – G1.15, G4.1)

This section is not applicable as the project is not a grouped project.

4. VERIFICATION FINDINGS

4.1 Public Comments (Rules 4.6)

The MR is available in both English/1/ and Chinese (as is a summary document of the MR)/2/. Both the documents were made available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2082>) for the public consultation period.

The public comment period was held from 17-September-2020 to 16-October-2020. No public comments were received for this project as confirmed by email from VCS on 19-October-2020/43/, the date after the VCS and CCB public comment period for draft project documents expired.

4.2 Summary of Project Benefits

As per the information available in the MR/1/ against the project benefits as determined in the PD/6/ and confirmed by the PP during the on-site interview, the climate objectives consist in the afforestation of degraded land, which would continue to remain degraded, increasing the carbon stocks in the following pools: above-ground biomass and below-ground biomass. Community objectives would ensure the creation of employment and provide relevant training (skilled labour force), which would positively influence the livelihoods and well-being of the population. Biodiversity objectives would preserve the conservation of wildlife and of biodiversity in the Region.

The project seeks to provide experience of forest planting and management in low-latitude and high-altitude mountain area, the mitigation of the local soil erosion caused by over grazing and the improvement of the ecological environment of surrounding area as the unique project benefits, and generate GHG emission removals, create forest cover, provide employment, training and improve skills to community members thus improve their livelihood and well-being, and beneficial to biodiversity conservation and globally Critically Endangered or Endangered species.

By comparing the information given in the PD/6/, CTI confirmed that this section of project benefits is completed appropriately, the achievements during this monitoring period is verified by the verification team and confirmed as correct and actual. Refer to below related sections for detail assessment.

As stated in section 2.4.4 of the monitoring report, sustainable financing from carbon revenue for the site is essential to enable conservation action to ensure project implementation and continuation achievement of CCB benefits.

Thus CTI concluded that all achievements reported are substantiated with information provided in the body of the monitoring report and confirmed by the assessment in the body of the verification report.

4.3 General

4.3.1 Implementation Status (G1.9)

The project activity is mainly implemented and in operation in accordance with the description contained in the validated PD/6/. As confirmed during the on-site inspection, interviews, the project implementer has implemented the activities as described in the registered PD in compliance with the VCS and CCBS requirements. The actual planted area accounts to 50,061

ha with four species native trees (China fir, Cypressess, Pinus yunnanensis and Masson pine) which is same to the registered PD.

The implementation status of the project activity are identified and the assessment steps are taken as the following,

Table 4-1 Assessment of implementation status of the project activity

Item	Assessment
The existence of any material discrepancies between project implementation and the project description.	No material discrepancies have been noted; absence of such material discrepancies was confirmed through onsite inspection and interviews with the project personnel.
The implementation status of the monitoring plan and the completeness of monitoring, including the suitability of the implemented monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters).	The monitoring has been carried out mainly in accordance with the monitoring plan contained in the validated monitoring plan. The project stratifications for carbon calculation is ex post determined as 10 which is consistent with the registered PD. And the total sample plots are calculated as 40. According to the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)"^{47/}, the number of plots within each stratum is calculated and total is confirmed as 40. As per the monitoring plan in the PD, it has stated that if there are changes in the area and boundary, the carbon stratification of the project needs to update. In addition, if the number of carbon stratum and the area change, the number of sample plots need to be recalculated, the project needs to consider tree species, patterns and other factors in actual planting, and update stratification to post-stratification. Due to there is no change to the area, boundary, tree species and planting, thus the post-stratification is consistent with the ex-ante determined in the registered PD and suitable for actual project implementation which is verified as reasonable and correct as per the methodology and tool. CTI verified that the actual monitoring complies with the actual implementation of the project and that data have been assessed to correctly support the emission removals being claimed.
The existence of any material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description	As assessed above, there is no change of the sampling plots in the actual monitoring system comparing with the monitoring plan. Through detailed review and data testing on implementation of all

and the applied methodology.	relevant aspects of actual monitoring system, CTI confirmed there is no material discrepancy between methodology and actual monitoring system. The actual monitoring system is implemented in line with the applied methodology.
Whether the GHG emission reductions or removals generated by the project have become included in an emissions trading program or any other mechanism that includes GHG allowance trading.	CTI confirmed, applying professional judgment, that there is very low risk of GHG removals having included in any other trading program or any other mechanism that includes GHG allowance trading which has been assessed and verified in the validation process.
Whether the project has received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification.	The verification team is unaware of any other environmental crediting program that project would be eligible to participate in since validation.
Whether the project has participated or been rejected under any other GHG programs since validation or previous verification.	There is no evidence of the project's rejection from any other GHG programs as the GS/63/, VCS/70/ and CDM/69/ project data base since validation.
Sustainable development contributions.	The project generates GHG emission removals by the afforestation of barren or degraded lands which would remain barren or degraded; it also generates social and environmental co-benefits as conservation of the biodiversity.
List any previously validated methodology deviations, project description deviations, and minor changes to the project description (each verification report must contain an exhaustive list of all deviations or changes applied to the project).	This is the first periodic verification, so there is no previously validated methodology deviations, project description deviations, and minor changes to the project description.

Based on above assessment, CTI concluded that the project has been implemented as described in the project description except the project minor change related to the tree species changed.

CAR 01, CAR 02 and CL 01 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.2 Risks to the Community and Biodiversity Benefits (G1.10)

The PD states the overall risks to the project are low, no major risks have arisen that may cause any loss of project benefits for the local community, climate and biodiversity, so that the long-term viability is assured. Natural risk identified are fire, diseases and insects, pesticide in PD/6/.

Fire risk is considered low because planting area is mostly barren land, local government sets the fireproofing period when using fire is forbidden in the open air and no fires occurred in the project

areas as confirmed during the on-site inspection. Also during this monitoring period, the fire was strictly controlled by local forest bureau who experienced in local natural risk control to minimize the potential effect which has been verified by interview with the local officer/12/. And PP has established fire prevention procedure in Integrated Forest Management Manual/28/ and carried out educational activities with the forest law and regulations on forest fire prevention which was confirmed by on-site interview with the local residents/13/ and also found the forest law and regulations on forest fire prevention were listed on the local notice boards. Via on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI verified that there was no fire disaster occurred during this monitoring period in project area.

The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by supervision and routine overseeing and the PP have in place a full Integrated Forest Management Manual/28/. The biological measures to control pests and diseases will be mainly adopted. Via on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI verified that there was no insects and disease disaster occurred during this monitoring period in project area.

The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide is strictly managed by well trained staff to minimize the potential effect/28/. As no insects and disease disaster occurred, the environmental friendly measures such as mixed species arrangements and seed and seedling quarantine have been adopted during this monitoring period. Via on-site interview with local residents/13/, technicians/13/ and government officers/12/, CTI verified that there was no significant pesticide application occurred as no insects and disease disaster occurred.

Based on above assessment, CTI confirmed that reasonable actions were in place and taken to mitigate risks to community and biodiversity benefits during this monitoring period.

4.3.3 Community and Biodiversity Benefit Permanence (G1.11)

The measures needed and taken to extend project benefits beyond the project lifetime include the selection of the species planted which assure the endurance/30/, the land use agreements with the land owner and project owner/38/, commercial logging will be forbidden/34/. The measures taken will extend many of the project benefits in the project lifetime.

By the on-site visit CTI confirmed that reasonable measures have been taken to enhance project benefits beyond the project lifetime, including forest management, aspects protecting the project lands and attempts to tie community success to project success.

Thus CTI concluded that reasonable measures have been taken to enhance project benefits beyond the project lifetime in accordance with the validated project description document.

4.3.4 Stakeholder Access to Information (G3.1- G3.3)

At the time of validation process, the PD as well as a summary in local languages were made available to the community through summary sheet of the project. The full project documentations was published on VCS and CCB website for public comments. Thus the local communities and other stakeholders can easily download documents from the website. The project owner has published the Monitoring Manual and Monitoring Plan to the local stakeholders on the notice

board which has been confirmed by checking the photo of the communities and stakeholders watching notice board/22/ and interview with local residents/13/.

Within the project area was made a Participatory Rural Appraisal (PRA) survey in Sep. 2014 before the project started with stakeholder meeting by the PP inviting local villagers, permanent workers in the project, forestry experts and government officers to inform people of the possible impact in terms of economics, social and biodiversity aspects that the project might have on the community. This was confirmed by the PPs and by the Participatory Rural Appraisal (PRA) survey report/20/ provided during the site visit. Via checking the contents in the PRA, CTI concluded that the project design details, relevancy and adequacy of the information has been provided to communities, and the analysis of project benefits to communities including all the potential impacts are provided to the stakeholders to let all the participants know the project's potential costs, risks and benefits. All the costs, risks and benefits are identified completely and adequately in the PRA process and during the site visit, by interviewed with the local stakeholders, CTI verified that they understand the project's potential costs, risks and benefits to communities with the project development and process. There is no any important costs, risks and benefits missed.

Furthermore, during this monitoring period, the project's potential costs, risks and benefits to communities with the project implementation has been explained to local stakeholders through stakeholder meeting held on 20-September-2019, and questionnaires survey conducted in from October to November in 2019 which has been confirmed by checking the 100 filled questionnaires/27/ collected during this period and cross verified by on-site interview with the local stakeholders/12/,/13/.

The project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching/22/.

Next, the monitoring results, monitoring plan and summary of the monitoring plan in local language, have been made publicly available on the CCB website (<https://registry.verra.org/app/projectDetail/CCB/2082>), which can be downloaded by stakeholders.

During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out on 27-September-2020 through audit meeting interview with local stakeholders by auditor. By on-site checking the photo/22/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 169 villages of the 1 district and 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/39/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders/23/.

Therefore, CTI concluded that the method for dissemination of project information, especially to local communities, appears to be effective.

CL 02, CL 03, CL 04 and CL 05 were raised and successfully closed. Refer to Appendix 3 for details.

4.3.5 Stakeholder Consultation (G3.4 – G3.5)

The PD discusses the way stakeholders were involved in the project design initially, furthermore, the MR discusses the meeting and consultation regarding design, implementation, monitoring and benefits are shared with stakeholders and communities. Pertinent information about the project is being well disseminated by the project, through traditional channels of communication. Adequate levels of information are reaching stakeholders.

As stated in PD, a consultation through PRA and meetings with the stakeholders was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the implementation. This has been confirmed by checking the PRA/20/ and related meeting questionnaires/21/. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires. Via checking all the questionnaires/21/ and by interview with the representatives during site visit, CTI confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement. Therefore, CTI verified that the comments from community groups and other stakeholders have been considered and would influence project implementation if necessary through effective consultation.

Before the project started, the stakeholder input on project implementation has been documented though meeting minutes and questionnaires as stated above.

Furthermore, during this monitoring period, the stakeholder input on project implementation have been monitored through in-person meetings and questionnaires survey conducted from October to November in 2019 which has been confirmed by checking the 100 filled questionnaires/27/ collected during this period and cross verified by on-site interview with the local stakeholders/12/,/13/. In addition, during the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out on 27-September-2020 through audit meeting interview with local stakeholders by auditor. During the meeting, project implementer introduced the monitoring results during this monitoring period and the comments from all the stakeholders have been documented as meeting minute. Via checking all the documents, CTI verified that there is no grievances and negative comments received during this monitoring period, which has been also confirmed during the stakeholder meetings in verification process.

During on-site interview with project owner and technicians, CTI confirmed that the project owner has a plan for continued communication. It is carried out by maintaining a direct line of communication with community members and relevant stakeholders through technicians located in each field. The technicians will conduct continuous in-person meetings with identified community groups and other stakeholders. And the project owner will consider all the recommendations and comments to improve or change project implementation if necessary. This is verified by on-site interview with project owner and technicians and also by checking the daily working log/24/ recorded by the technicians which including the stakeholder consultation process

and results. Furthermore, the project owner promised that they will carry out the continued communication as planning.

Based on above demonstration, CTI confirmed that all consultation and participatory process have been undertaken directly with communities and other stakeholders through village notice boards and stakeholder meetings. And 100 representatives from local stakeholders filled the questionnaires whom covered different locations, different ages, different occupations and different education levels. Also 20 representatives from local stakeholders participated in the verification process stakeholder interview.

Hence, CTI concluded that the project's method for conducting communities and stakeholders consultations is effective.

CL 06 was raised and successfully closed. Refer to Appendix 3 for details.

4.3.6 Stakeholder Participation in Decision-making and Implementation (G3.6)

Before the project implementation, as assessed in the registered PD, a consultation through PRA and meetings with the stakeholders was made for introducing people about the project impacts and ask them to raise their opinions of the project design and their willingness to participate the following implementation. This has been confirmed by checking the PRA/20/ and related meeting questionnaires/21/. The stakeholders are invited to provide their comments regarding the project implementation and impacts to them, also PP considered their participation in decision-making by asking all the participants to fill the questionnaires. Via checking all the questionnaires/21/ and by interview with the representatives/12/,/13/ during site visit, CTI confirmed that all the participants agreed the implementation of the project, therefore, from that point, the project design was not modified and the project started with local stakeholder's agreement.

During the project implementation, local consultations, community monitoring, dissemination of project and monitoring information are taken. The identified stakeholders are local government and villagers located in surrounding villages. Representatives of stakeholders covering different locations in project zone, different age, gender and culture background have been distributed by questionnaires and all the feedback are considered by project owner for changing the project implementation if necessary. Via checking all the questionnaires/21/ and by interview with the representatives/12/,/13/ during site visit, CTI confirmed that all the participants agreed the project implementation and they confirmed they have effectively participated and involved in project implementation, monitoring, and evaluation by communication with project owner, noticed by village notice boards and asked to fill the related questionnaires. Therefore, from that point, the project monitoring was not modified.

Due the nature of stakeholders identified and the actions taken by the project owner for their involvement can confirm the project enabled community participation in project implementation.

Furthermore, via on-site interview with the local women stakeholders and technicians, CTI verified that they are encouraged by PP to participate the working, stakeholder meeting and maintaining the regular communications with Sorority Director and Nationalities Officer of local counties. Thus the culture- and gender-sensitivity of implementation of such actions has been demonstrated.

CAR 03 was raised and successfully closed. Refer to Appendix 3 for details.

4.3.7 Anti-discrimination (G3.7)

During the interview with the project owner, local officers and technicians, CTI verified that the project proponent and all other entities involved in project design and implementation are not involved in or complicity in any form of discrimination or sexual harassment with respect to the project due to the labor contract was signed based on the <Labor Law of the People's Republic of China>/66/ with anti-discrimination assurance. <Labor Law of the People's Republic of China> is the national law to protect the legitimate rights and interests of workers, the clause 12 in this law is related to anti-discrimination assurance. Thus this law as specific policy is put in place by the project proponents to prevent discrimination, thus it is ensured that the project proponent and all other entities involved in project design and implementation will not violate the standard's anti-discrimination requirement. The stakeholder involvement was inclusive without any discrimination of gender, cultural identity and religion. The own policies guarantee that no type of discrimination is tolerated at any point of the project implementation.

The stakeholder involvement was inclusive without any discrimination of gender, cultural identity and religion. The national policies/66/ guarantee that no type of discrimination is tolerated at any point of the project implementation.

Furthermore, via checking the labor contracts with technicians/36/ and interview with the women stakeholders and technicians, CTI verified that 50 women were employed as technicians and they are under the protection of the national laws and policies and no any form of discrimination or sexual harassment with respect to the project.

4.3.8 Stakeholder Feedback and Grievance Redress Procedure (G3.8)

A grievance redress process is in place as per the PD/6/ and validation report/7/. A specific staff is in charge of recording and collecting conflicts and grievances of local communities and individual farmers. He was nominated who is the first responsible for responding to requests from the community. Stakeholders can either appeal through village representatives or directly to the local forestry bureau.

During the on-site interview with the specific staff and checking his recordings/25/ about the conflicts and grievances of local communities during this monitoring period, CTI verified that there is no any grievances raised in this implementation period.

Hence, CTI confirmed that the formal grievance process was outlined sufficiently in the monitoring report and confirmed on-site during discussion with project personnel and CTI concluded that the grievance redress procedure has been implemented according to the project's validated design.

4.3.9 Worker Relations (G3.9 – G3.12)

The steps taken to verify the project proponent has taken actions and implemented measures to ensure that the relationship between the project and workers meet the CCB requirements have been listed as below:

1. Build the capacity of the communities through job training and employment

Forest Management Manual/28/ includes technical advice is provided for each technician and trainings are offered for all the technicians immediately once they were hired and continuously for different topics like physical safety measures, health, forest land inspection, use of monitoring

and measuring instruments and data records which are useful for effective forest management and monitoring. By checking the sample of training records of the technicians/42/, CTI verified that the trainings are offered for all the technicians immediately once they were hired. Furthermore, till the time of verification, several trainings were provided to technicians in each October from January 2016 to December 2019 related to planting, tending and monitoring skills and experience which verified by checking the training records/42/. Besides, in order to carry out a successful and efficient monitoring survey, special trainings providing orientation for the field measurement, project monitoring, community surveys were provided to technical staffs prior to the monitoring activities for this monitoring period. The continuous training is confirmed as provided.

In addition, via on-site interview with the local villagers, CTI verified that Monitoring Manual has been distributed to each village by notice board and the local officers from forest bureau had provided the live demonstrations.

Thus it is demonstrated that the project is building local capacity through job skills training and manual distribution.

2. People from the communities are given an equal opportunity to fill work positions

The project makes an effort to hire locally as confirmed by the project manager during the on-site visit and hiring criteria are based on skill sets without discrimination. Actually 95 person (nearly half are women) from the local communities are involved in the project activity during this monitoring period and they are properly hired as technicians for forest management, inspection and monitoring by verifying the labor contracts/36/. Furthermore, via checking the monthly payroll/37/ to technicians and maintenance workers, CTI verified that an equal opportunity and payment are given to the employments.

3. The project is in compliance with all relevant laws and regulations regarding worker's rights and workers are informed of their rights

A relevant law to which the PPs shall comply is available in the validated PD/6/ and in the monitoring report, the hiring process is governed by the labour code and all workers have a contract in which its duties, rights and laws that protect them are reported, this is confirmed via checking the labor contracts/36/ and on site interview with local government officer/12/ and forest technicians/13/.

4. Inform workers of risks and how to minimize risk and Minimize workplace risk using best work practices.

The PD states that the project owner shall meet <Safety and Healthy in Forestry Work> published by ILO and <Labor Law of the People's Republic of China> regarding workers' health and safety. Both the two regulations are confirmed as international and national rule and laws which can be used as the occupational safety regulations to obey. The activities that endanger workers are those related to workplace accidents due to the use of dangerous machinery that requires qualified personnel and basic supplies and uniform to prevent accidents and the workers are also trained providing information and practical exercises to prevent any risk which has been verified by checking the training records/42/. During the monitoring period, due to the fire risk, basic supplies and uniform for evacuation plan is available to the technicians which has been confirmed during site observation and interview with the technicians/13/.

Based on above step-wise assessment, CTI concluded that the relationship between workers and the project upholds the intent and design presented in the validated project description.

4.3.10 Management Capacity (G4.2 – G4.3)

The steps taken to verify the project proponent has taken actions and implemented measures to ensure the capacity exists to implement the project over the project lifetime is demonstrated as below:

1. Key technical and management skills

Key technical skills required to implement the project are mentioned in the PD/6/. Via checking the staff list of above three actors/36/,/37/, CTI confirmed that for each individual, experience and education and other qualifications are cited. The PPs and team have the skills necessary to be required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills. The project team at the time of the validation process is confirmed in the monitoring report. During the on-site verification process, the verification team conducted the sampling to the sample plots for carbon and biodiversity measurement, CTI confirmed that the PPs and team have the skills to the project implementation and CCB measurement and monitoring.

2. Financial health

During the on-site visit and checking the business license/16/ of the participant parties, CTI confirmed that the project proponent Guizhou Xinzhanxin Agricultural Technology Co., Ltd. is a privacy and legally registered company. Other involved entities Shanghai Libra Investment & Management Co., Ltd is also a legally registered company in China. The PD states that neither the project owner and nor the other parties have been suspected of charged with or found guilty of corruption, bribery, embezzlement, fraud, favoritism, cronyism, nepotism or collusion. Furthermore, through checking the company information in National Enterprise Credit Information Publicity System/67/, CTI confirmed that during this monitoring period, both the companies are legally operated, the financial health is verified. And by checking the website, CTI confirmed that during this monitoring period neither the project owner and nor the other party have been suspected of charged with or found guilty of corruption, bribery, embezzlement, fraud, favoritism, cronyism, nepotism or collusion. Via checking the public website of credit information system/25/ of Chinese company/67/, CTI confirmed that the statement in MR is actual and credible. Thus, CTI concluded that the financial health of the implementing organizations is verified and they can ensure adequate financial support over the project lifetime.

3. Not complicit in any form of corruption

As legally registered companies according to above assessment, the project proponent and other involved entity in project implementation have the obligation to comply with relevant regulations, including anti-corruption law. This is verified by checking the company information in National Enterprise Credit Information Publicity System/67/ and on-site observation with company business license/16/. Thus CTI concluded that the project is not involved or complicit in any form of corruption during this monitoring period.

Therefore, CTI verified that the project has the capacity to implement the project in accordance with the validated project description/6/.

4.3.11 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

None of the commercially sensitive information found in all the documents of the project.

4.3.12 Rights Protection and Free, Prior and Informed Consent (G5.1-G5.5)

The steps taken to verify actions taken and measures implemented by the project proponent to protect the rights of Indigenous Peoples, communities and other stakeholders are listed as below:

1. Property rights

Prior to the project initiation, the project lands are collective-owned by local villages, this is verified by checking the Certification of land rights/26/. The local farmers have the right to the use of land/38/. The project owner and forestry department are responsible for the comprehensive implementation and management of the project /38/.

2. Does not encroach uninvited on private, community or government property.

The project proponent and forestry department from local government are responsible for the comprehensive implementation and management of the project as defined in the land use agreement and project approval/38/, /9/. Via on-site interview with the local officer and villagers, CTI verified that no entity can encroach the project area as private, community or government property and change the land usage type.

3. Free, prior and informed consent

The local villagers have the right to the use of land, and Guizhou Xinzhanxin Agricultural Technology Co., Ltd. is authorized by local villages to implement the project as a project proponent, which is confirmed by checking the land use agreement/38/. Thus CTI verified that prior and informed consent has been obtained from villagers whose property rights are affected by the project through a transparent and agreed process.

4. Appropriate restitution or compensation

As stated in the validated PD, CTI verified that the project area are mostly degraded land and barren land with no residents in baseline scenario, thus CTI confirmed that there was no residents to be migrated. And by checking the PRA process results, CTI verified that all the local stakeholders voluntarily agreed the implementation of the project before started, and as above statement, CTI confirmed that the state-owned forest farms and local villagers have the right of land, and this will not be changed by the project implementation, hence, no compensation is requested from the state-owned forest farms and local villagers.

5. Do not lead to the involuntary removal or relocation

Based on above assessment, CTI concluded that the project does not complicit of involuntary relocation as within the project area there are no communities living or depending on the resources located inside the areas through checking the land use agreement and project approval/38/, /9/ and onsite observations and interview with technicians from forest farms and local villagers/13/.

6. Reduce illegal activities

Via on-site interview with local government officers, communities, technicians and on-site observation, CTI verified that there are no illegal activities inside the project area or in neighboring areas; the area is considered as being peaceful and excluded from social conflict.

Furthermore, any illegal logging activities will be fined or sentenced to punishment according to Chinese laws/65/, and the forests are preserved by project staff regularly as determined in the Integrated Forest Management Manual/28/, thus CTI confirmed no illegal deforestation occurred during this monitoring period. In conclusion, the project's climate, community and biodiversity impacts will not be affected by the illegal activities.

7. None of unresolved dispute

As local villages have voluntarily authorized the right of forest management to the project proponent during the project crediting period, thus there are no ongoing unresolved conflicts over land rights territories and resources in the project zone. This is confirmed by on site interview with officers from local Forestry Bureau/12/ and local residents/13/ and checking the land use agreement/38/. And as stated by local officer, CTI confirmed that the local government was responsible to supervise the local villager's right to the land. And the project did not violate the ownership of the land by the villagers and stakeholders, and then did not encroach uninvited on private property, community property, or government property during this monitoring period, which is in line with the CCB rules.

Therefore, CTI concluded that the project has protected the rights of Indigenous Peoples, communities and other stakeholders in accordance to the third edition of the CCB standard and the validated project description/6/.

4.3.13 Legal Status (G5.6)

Both the validated PD/6/ and the MR provide an extensive list of internal agreements, regulations, national and local laws and explain their applicability to the project and the way compliance with the law is achieved by the project where applicable. The laws and regulations are confirmed through checking the public website/65/, /68/ which has been compared with the actual situation of the project by on-site observation during this monitoring period, and by interview with the local officers, CTI verified that the project is not in violation of any local or national laws or regulations.

4.4 Climate

4.4.1 Accuracy of GHG Emission Reduction and Removal Calculations

Monitoring approach

The monitoring has been carried out in accordance with the monitoring plan contained in the validated PD/6/.

The following table describe for each parameter which data are fixed ex-ante. Data and parameters fixed ex-ante as listed in the monitoring report have been cross-checked and reviewed as applicable against the validated PD/6/ and applied methodology/44/.

The following list shows the default values used in this verification for GHG removals calculation:

Table 4-2 Assessment of ex-ante determined parameters

Parameter	Description	Value applied	Assessment
A _i	Area of all stratum <i>i</i> (ha)	50,061	In the ex-ante estimation, the value of 50,061 ha was taken by Field measurement, this value is confirmed as reasonable and

				consistent with the validated PD/6/, thus used for ex post GHG removals calculation.
BEF _{2,j}	Biomass expansion factor for conversion of stem biomass to above-ground biomass	Tree species	BEF_{2,j}	In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013/72/. The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
		China fir	1.634	
		Masson pine	1.472	
		Cypress	1.732	
		Pinus yunnanensis	1.619	
CF _{TREE}	Carbon fraction of tree biomass for tree species or group of tree species <i>j</i> (t C t ⁻¹ d.m.)	Tree species	CF_{TREE}	In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013/72/. The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
		China fir	0.520	
		Masson pine	0.460	
		Cypress	0.510	
		Pinus yunnanensis	0.511	
D _j	Basic wood density	Tree species	D_j	In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013/72/. The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
		China fir	0.307	
		Masson pine	0.380	
		Cypress	0.478	
		Pinus yunnanensis	0.483	
R _j	Root-shoot ratio of tree species <i>j</i> (Dimensionless)	Tree species	R_j	In the ex-ante estimation, the default values were taken from The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013/72/. The default values are confirmed as reasonable due to these are National authority data, thus used for ex post GHG removals calculation.
		China fir	0.246	
		Masson pine	0.187	
		Cypress	0.220	
		Pinus yunnanensis	0.146	
t _{VAL} (for calculation of n)	Two-sided Students t-value, at infinite degrees of freedom for the required confidence level (Dimensionless)	1.645		This value is not listed in the PD as ex-ante parameter. This value is used to determine the total number of sample plots (n) as stated in the A/R Methodological Tool “Calculation of the number of sample plots for

			measurements within A/R CDM project activities” (Version 02.1.0)/47/. As per the tool, Use the 90% confidence level for determination of biomass stock in A/R CDM project activities, and value is defined as 1.645 in the tool. This is the first monitoring period, the total number of sample plots (n) has to be determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as ex-ante parameter in MR is correct and in line with the methodological tool/47/.
--	--	--	---

CTI confirmed that the parameters listed above are fixed ex-ante and used for baseline and project emissions calculation in accordance with the applied methodology and methodological tools.

The following table describe for each parameter which is to be measured according to the monitoring plan and how the verification team has verified that the actual monitoring complies with the monitoring plan and that data have been assessed to correctly support the GHG removals being claimed.

Table 4-3 Assessment of ex-post determined parameters

Parameter	Description	Value applied	Assessment
$V_{TREE,j}$; $V_{TREE,l,p,j,i}$	Stem volume of tree species j; Stem volume of tree l of species j in sample plot p of stratum i	Refer to ER sheet for details.	This is a calculated value and for the ex-post estimation during verification, using allometric equations based on tree dimensions (comprise of height and diameter at breast height) to calculate the stem volume. This parameter is listed in the validated PD/6/ as the stem volume was designed in the PD to calculate the tree biomass, and the related allometric equations were used in the MR to calculate the stem volume. This approach is confirmed as in line with the applied methodology/44/ and its tools. Also the allometric equation is verified as conservative for the estimation of GHG removals.
$H_{l,p,j,i}$; $DBH_{l,p,j,i}$	Height of tree l of species j in sample plot p of stratum i; Diameter at breast height of tree l of species j in sample plot p of stratum i	Refer to ER sheet/3/ for details.	These two parameters are monitored by Field measurements in sample plots and they are two tree dimensions used as entry data into the stem volume equations for the calculation of stem volume of trees as stated in above column. And the allometric equation used will be demonstrated to be appropriate for the purpose of estimation

	(m, cm)		of tree biomass by applying the tool “Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities”/45/. All the field measured data are measured at the sample plots according to the sampling plan, and then the data are collected and recorded for an electronic copy with the combination of the maps for the ERs calculation. All the measured data and calculation process are provided and verified. The values were measured by the monitoring equipment of Tape, Range pole and Vernier caliper. Hypsometer and metric tape were used to measure the height of the tree and range pole with the tree height mark, and vinyl tape, wooden stake was used to measure the diameter at breast height. CTI verified that the approach is in line with the National standard: LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau/57/ and HJ 710.1-2014 “Technical guidelines for biodiversity monitoring—terrestrial vascular plants” issued by Ministry of environmental protection/60/. All the devices have a state-recognized certificate of qualification which has been verified by checking the products qualification/58/ and confirmed as no need to be calibrated. Based on the verification team’s local expertise and searching the applicable national calibration regulations for these devices, CTI verified that there is no need to do the calibration for these kinds of equipment. Hence, CTI concluded that the measurement devices and calibration information is correct and applicable to the monitoring of this project. During the onsite visit, the verification team conducted randomly re-measurement in sample plot selected by verification team for each stratum of the project activity, and verified the initial field measurement records provided by the PP, cross checked with the field measurement results and found they are consistent with the data presented in the MR and the ER calculation spreadsheet. Refer to below sub section of “Sampling”
--	---------	--	--

			Approach” for details of the PP sampling plan assessment and sampling approach taken by verification team during site inspection.																										
A _i ; A _{PLOT,i}	Area of stratum <i>i</i> ; Size of sample plot in stratum / (ha)	<table border="1"> <thead> <tr> <th>Strata <i>i</i></th> <th>Aⁱ</th> </tr> </thead> <tbody> <tr> <td>Unit</td> <td>ha</td> </tr> <tr> <td>1</td> <td>19,245.27</td> </tr> <tr> <td>2</td> <td>8,477.07</td> </tr> <tr> <td>3</td> <td>3,121</td> </tr> <tr> <td>4</td> <td>500</td> </tr> <tr> <td>5</td> <td>2,345</td> </tr> <tr> <td>6</td> <td>2,226.4</td> </tr> <tr> <td>7</td> <td>500</td> </tr> <tr> <td>8</td> <td>8,204.4</td> </tr> <tr> <td>9</td> <td>2,441.93</td> </tr> <tr> <td>10</td> <td>3,000</td> </tr> <tr> <td>Total</td> <td>50,061</td> </tr> </tbody> </table> A_{PLOT,i} : 0.07 (ha)	Strata <i>i</i>	A ⁱ	Unit	ha	1	19,245.27	2	8,477.07	3	3,121	4	500	5	2,345	6	2,226.4	7	500	8	8,204.4	9	2,441.93	10	3,000	Total	50,061	The areas of stratum is measured through GPS measuring equipment. 50,061 ha planted area and 10 strata are ex-post defined. For the field measurements, a circular sample plot with a diameter of 30m design has chosen; the sample plot design is determined in the registered PD/6/ and plots are measured with a fiberglass tape from a fixed central point, and adjusted by the slope when needed which is verified as in line with the National standard: LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau/57/. During site measurement by verification team for each plot, the radius is measured as 30 m and the plot area is equal to 0.07 ha.
Strata <i>i</i>	A ⁱ																												
Unit	ha																												
1	19,245.27																												
2	8,477.07																												
3	3,121																												
4	500																												
5	2,345																												
6	2,226.4																												
7	500																												
8	8,204.4																												
9	2,441.93																												
10	3,000																												
Total	50,061																												
N _{i,j}	Number of the tree species j of strata i	Refer to ER sheet for details	The number of tree species in each sample plot was measured by field measurement through counting the number inside the sample plot. During the onsite visit, the verification team conducted randomly re-counting in sample plots selected by verification team for each stratum of the project activity cross-checked with the field measurement numbers provided by the PP, and found they are consistent with the data presented in ER calculation spreadsheet.																										
n	Number of sample plots required for estimation of biomass stocks within the project boundary (Dimensionless)	24	The number of sample plots is calculated based on the methodological Tool: Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)/47/ using the below equation $n = \left(\frac{t_{VAL}}{E} \right)^2 \times \left(\sum_i w_i \times s_i \right)^2$ This is the first monitoring period, the total number of sample plots (n) has to be determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool/47/.																										

n_i	Number of sample plots allocated to strata i (Dimensionless)	<table><tr><th>Strata i</th><th>n_i (calculation result)</th></tr><tr><td>Unit</td><td>-</td></tr><tr><td>1</td><td>11</td></tr><tr><td>2</td><td>5</td></tr><tr><td>3</td><td>2</td></tr><tr><td>4</td><td>0</td></tr><tr><td>5</td><td>1</td></tr><tr><td>6</td><td>1</td></tr><tr><td>7</td><td>0</td></tr><tr><td>8</td><td>3</td></tr><tr><td>9</td><td>1</td></tr><tr><td>10</td><td>2</td></tr></table>		Strata i	n_i (calculation result)	Unit	-	1	11	2	5	3	2	4	0	5	1	6	1	7	0	8	3	9	1	10	2	The number of sample plots allocated to strata i is calculated based on the methodological Tool: Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 02.1.0)/47/ using the below equation $n_i = n \times \frac{w_i \times s_i}{\sum_i w_i \times s_i}$ This is the first monitoring period, the Number of sample plots allocated to strata i (n_i) has to be determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool/47/.
Strata i	n_i (calculation result)																											
Unit	-																											
1	11																											
2	5																											
3	2																											
4	0																											
5	1																											
6	1																											
7	0																											
8	3																											
9	1																											
10	2																											
		Thus																										
		<table><tr><th>Strata i</th><th>n_i (Sample Plots Number)</th></tr><tr><td>Unit</td><td>-</td></tr><tr><td>1</td><td>11</td></tr><tr><td>2</td><td>5</td></tr><tr><td>3</td><td>3</td></tr><tr><td>4</td><td>3</td></tr><tr><td>5</td><td>3</td></tr><tr><td>6</td><td>3</td></tr><tr><td>7</td><td>3</td></tr><tr><td>8</td><td>3</td></tr><tr><td>9</td><td>3</td></tr><tr><td>10</td><td>3</td></tr></table>		Strata i	n_i (Sample Plots Number)	Unit	-	1	11	2	5	3	3	4	3	5	3	6	3	7	3	8	3	9	3	10	3	
Strata i	n_i (Sample Plots Number)																											
Unit	-																											
1	11																											
2	5																											
3	3																											
4	3																											
5	3																											
6	3																											
7	3																											
8	3																											
9	3																											
10	3																											
E	Acceptable margin of error (i.e. one-half the confidence interval) in estimation of biomass stock within the project boundary (t d.m. ha ⁻¹)	11.563																										
w_i	Relative weight	<table><tr><th>Strata i</th><th>w_i</th></tr></table>		Strata i	w_i																							
Strata i	w_i																											
		This is a calculated value.																										

	of the area of stratum i (i.e. the area of the stratum i divided by the project area) (Dimensionless)		<table> <tr><th>Unit</th><th>/</th></tr> <tr><td>1</td><td>0.38444</td></tr> <tr><td>2</td><td>0.16933</td></tr> <tr><td>3</td><td>0.06234</td></tr> <tr><td>4</td><td>0.00999</td></tr> <tr><td>5</td><td>0.04684</td></tr> <tr><td>6</td><td>0.04447</td></tr> <tr><td>7</td><td>0.00999</td></tr> <tr><td>8</td><td>0.16389</td></tr> <tr><td>9</td><td>0.04878</td></tr> <tr><td>10</td><td>0.05993</td></tr> </table>	Unit	/	1	0.38444	2	0.16933	3	0.06234	4	0.00999	5	0.04684	6	0.04447	7	0.00999	8	0.16389	9	0.04878	10	0.05993	The relative weight of the area of stratum <i>i</i> is equal to the area of the stratum <i>i</i> divided by the project area. This is the first monitoring period, the relative weight of the area of stratum <i>i</i> (<i>w_i</i>) has to be determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool/47/.		
Unit	/																											
1	0.38444																											
2	0.16933																											
3	0.06234																											
4	0.00999																											
5	0.04684																											
6	0.04447																											
7	0.00999																											
8	0.16389																											
9	0.04878																											
10	0.05993																											
<i>s_i</i>	Estimated standard deviation of biomass stock per unit area in strata i (t d.m. ha ⁻¹)		<table> <tr><th>Strata <i>i</i></th><th><i>s_i</i></th></tr> <tr><th>Unit</th><th>t d.m. ha⁻¹</th></tr> <tr><td>1</td><td>38.996</td></tr> <tr><td>2</td><td>37.945</td></tr> <tr><td>3</td><td>36.831</td></tr> <tr><td>4</td><td>30.712</td></tr> <tr><td>5</td><td>28.896</td></tr> <tr><td>6</td><td>27.078</td></tr> <tr><td>7</td><td>26.570</td></tr> <tr><td>8</td><td>25.778</td></tr> <tr><td>9</td><td>24.948</td></tr> <tr><td>10</td><td>40.638</td></tr> </table>	Strata <i>i</i>	<i>s_i</i>	Unit	t d.m. ha ⁻¹	1	38.996	2	37.945	3	36.831	4	30.712	5	28.896	6	27.078	7	26.570	8	25.778	9	24.948	10	40.638	The values of this parameter are calculated by biomass stock per unit area multiply the existing standard deviation data related to the project area. Standard deviation is derived from the existing data related to the project area issued by the Zunyi Forest Bureau based on the results of years of forestry surveys/29/. This is the first monitoring period, the Estimated standard deviation of biomass stock (<i>s_i</i>) has to be determined so that the monitoring can be done for measuring the sampling, hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
Strata <i>i</i>	<i>s_i</i>																											
Unit	t d.m. ha ⁻¹																											
1	38.996																											
2	37.945																											
3	36.831																											
4	30.712																											
5	28.896																											
6	27.078																											
7	26.570																											
8	25.778																											
9	24.948																											
10	40.638																											
<i>u_c</i>	Uncertainty in carbon change ΔC_{TREE} (Dimensionless)	7.88%	The parameter is used to determine the uncertainty discount, the value is calculated by below equation as per the tool of “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” version 04.2/46/. $u_c = \frac{t_{VAL} \times \sqrt{\sum_{i=1}^M w_i^2 \times \frac{s_{\Delta i}^2}{n_i}}}{ \Delta b_{TREE} }$ As per the tool, “if <i>u_c</i> estimated from above Equation is greater than 10 per cent, ΔC_{TREE} is made conservative by applying uncertainty discount according to the procedure provided in Appendix 2” /46/. The value of <i>u_{Δc}</i> is calculated as 7.88%, hence, the uncertainty discount is not used for this monitoring period. This value is not listed in the PD as a monitored parameter. But used to calculate uncertainty discount as stated in the A/R Methodological Tool																									

			"Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" (Version 04.2)/46/. Hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
bTREE	Mean change in tree biomass per hectare within the biomass estimation strata (t d.m.ha ⁻¹)	10.4919	The parameter is used to calculate uncertainty in carbon stock u_c, the value is calculated by all the sample plots results. Variance is calculated as mean change value based on the biomass/ha values for all the sample plots for each stratum. This value is not listed in the PD as a monitored parameter. But used to calculate uncertainty in carbon stock as stated in the A/R Methodological Tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" (Version 04.2)/46/. Hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.
t _{VAL} (for calculation of u_c)	Two-sided Students t-value for a confidence level of 90 per cent and degrees of freedom equal to $n - M$, where n is total number of sample plots within the tree biomass estimation strata and M is the total number of tree biomass estimation strata (Dimensionless)	1.697	t_{VAL}(for calculation of u_c) is the parameter from Tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" (Version 04.2)/46/ used to calculate u_c. And the value is derived from "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0)/47/ due to n (total number of sample plots within the tree biomass estimation strata) is 40 and M(the total number of tree biomass estimation strata) is 10. Thus degrees of freedom equal to $n-M$ is 30, via checking the tool of "Calculation of the number of sample plots for measurements within A/R CDM project activities" (Version 02.1.0)/47/, the value of t_{VAL} is 1.697 by degree of freedom is 30 at confidence level of 90%. This value is not listed in the PD as a monitored parameter. But used to calculate uncertainty in carbon stock as stated in the A/R Methodological Tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" (Version 04.2)/46/. Hence, CTI verified that the value listed as monitored parameter in MR is correct and in line with the methodological tool.

CTI confirmed that the validated monitoring plan has been properly implemented and followed by the PPs and all parameters needed for calculate GHG removals have been monitored.

Sampling approach by PP

PP has adopted a sampling method in the MR according to the validated PD, according to the A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 02.1.0/47/ to determine the sample plots number for measurement and monitoring during this monitoring period. The number of sampling plots is calculated as below sub-steps:

I. Post stratification

The post stratification is same to the prior stratification as defined in the approved PD due to there is no change the project design and the project is implemented as per the registered PD, the post stratification during this monitoring period is listed in below table,

Table 4-4 Post-stratification during this monitoring period

Strata	Area (ha)	Tree species	Year to plant
Total	50,061	-	
1	19,245.27	China fir	2015
2	8,477.07	China fir	2016
3	3,121.00	China fir	2017
4	500.00	Cypresses	2015
5	2,345.00	Cypresses	2016
6	2,226.40	Cypresses	2017
7	500.00	Pinus yunnanensis	2015
8	8,204.40	Pinus yunnanensis	2016
9	2,441.93	Pinus yunnanensis	2017
10	3,000	Masson pine	2015

Thus, CTI verified that post stratification has been implemented taking into account of the growth rates of species, planting period and patterns same to the ex-ante determination in the registered PD. Via on-site inspection, CTI verified that the ex post stratification is correct and reasonable in line with the actual status of the project implementation.

II. Calculation of number sample plots

As a follow up to ex post stratification, the calculation of number sample plots and their allocation to the project strata has been revised.

PP calculated numbers based on the A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 02.1.0/47/. As determined in the validated PD, the plot size is set to be a circular area with a diameter of 30m and the area of each sampling plot is calculated about 706.86 m², which is much less than 5% of the total project area, thus according to the tool, this is defined as a small sampling fraction (that is, when area sampled is less than 5% of the project area), the following simplified equation can be used for estimating the number of sample plots:

$$n = \left(\frac{t_{VAL}}{E} \right)^2 \times (\sum_i w_i \times s_i)^2 \quad (1)$$

Where:

- n = Number of sample plots required for estimation of biomass stocks within the project boundary; dimensionless
- t_{VAL} = Two-sided Students t-value at infinite degrees of freedom for the required confidence level; dimensionless
- E = Acceptable margin of error (i.e. one-half the confidence interval) in estimation of biomass stock per unit area within the project boundary; t d.m. ha⁻¹, i.e. in the units used for s_i
- w_i = Relative weight of the area of stratum i (i.e. the area of the stratum i divided by the project area); dimensionless
- s_i = Estimated standard deviation of biomass stock per unit area in stratum i ; t d.m. ha⁻¹
- i = 1, 2, 3, biomass stock estimation strata within the project boundary

Number of sample plots allocated to a strata is calculated as:

$$n_i = n \times \frac{w_i \times s_i}{\sum_i w_i \times s_i} \quad (2)$$

Where:

- n_i = Number of sample plots allocated to strata i ; dimensionless
- n = Number of sample plots required for estimation of biomass stocks within the project boundary; dimensionless
- w_i = Relative weight of the area of strata i (i.e. the area of the stratum i divided by the project area); dimensionless
- s_i = Estimated standard deviation of biomass stock per unit area in strata i ; t d.m. ha⁻¹

Based on the assessment for the above parameters in the monitoring parameters part, the mean biomass stock with the project boundary and the standard deviation of biomass stock in each strata were estimated as per the request in the tool using existing value related to the local project area, which were used to calculate the final number of sample plots based on formula (1) and (2) as mentioned above, via checking the MR against the methodological tool, CTI verified that the values are determined correct based on the tool.

The sample plots were allocated to each stratum based on size of each stratum relative to the total project area.

The number of sampling plots used for monitoring and measurement are listed in table below,

Table 4-5 Number of sample plots in each stratum

Strata	W_i	S_i	t_{VAL}	E	n	n_i	Number of sample plots
1	0.38444	38.996	1.645	11.563	24	11	11

2	0.16933	37.945				5	5
3	0.06234	36.831				2	3
4	0.00999	30.712				0	3
5	0.04684	28.896				1	3
6	0.04447	27.078				1	3
7	0.00999	26.570				0	3
8	0.16389	25.778				3	3
9	0.04878	24.948				1	3
10	0.05993	40.638				2	3

The total numbers of sample plots for the **50,061** ha are 40. After determined the number of the plots, PP randomly selected the location for all the sample plots. Via checking the project area KML file/35/, CTI verified that there are totally 169 planting plots included in the project area. The PP has randomly selected the 40 sample plots from these planting plots. Via checking the sampling plots selection records/33/, CTI confirmed that the location of the sample plots are selected randomly using the Excel random function and ArcGis software. And the location of the sampling plots have been clearly and correctly listed in the MR.

Sampling approach by verification team

During the site visit, the verification team performed sample of 23 samples selected by PP. Field sampling and techniques based on the project parameters, scope and best professional judgement of the verification team in order to meet a reasonable level of assurance.

The sampling approach during on-site verification is determined taking into account the accessibility and similitude of the areas and the tool for sampling was referred by verification team for the site verification. The sampling design (number of plot, location) is considered to be in line with the requirements for validation (IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12. : $x = \sqrt{y}$), and it has ensured a representative cross-section of the properties in the areas.

Verification team performed sample calculated as below,

- Stratum 1, number of plots y is 11. $X = \sqrt{11} = 3$
- Stratum 2, number of plots y is 5. $X = \sqrt{5} = 2$
- Stratum 3, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 4, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 5, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 6, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 7, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 8, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 9, number of plots y is 3. $X = \sqrt{3} = 2$
- Stratum 10, number of plots y is 3. $X = \sqrt{3} = 2$

Verification team randomly selected 23 sample plots from each strata from the PP sampling plots inventory/32/ and a ground inspection of the project area was conducted during the site visit and members of the verification team visited 23 sample plots from 40 PP samples within the project area.

The measurement results carried during verification team operation and the raw data of rest of the 17 sample plots were checked against the ER spread sheets and the same was found to be acceptable without any deviation. The measurement results carried out by verification team are concluded as below table:

Table 4-6 Measurement results conducted by verification team

Strata	Sample No.	Longitudes (E)	Latitudes (N)	Number of saplings	Mean DBH (cm)	Mean Height (m)
1	ID-W5	107°39'47"E	28°30'08"N	199(China fir)	4.2	4.7
1	ID-D19	107°43'38"E	28°43'22"N	199(China fir)	4.1	4.6
1	ID-D7	107°44'49"E	28°45'11"N	198(China fir)	4.1	4.6
1	ID-S31	107°20'51"E	28°09'45"N	200(China fir)	5.0	5.7
2	ID-S11	107°01'44"E	28°14'19"N	194(China fir)	3.9	4.4
2	ID-S33	107°21'10"E	27°12'03"N	199(China fir)	4.4	5.0
2	ID-T9	106°53'39"E	28°08'36"N	199(China fir)	3.9	4.5
3	ID-M19	107°28'36"E	27°50'07"N	189(China fir)	3.0	3.5
3	ID-S37	107°12'32"E	27°53'11"N	188(China fir)	3.0	3.5
4	ID-S25	107°05'02"E	28°26'55"N	196(Cypresses)	5.0	4.8
4	ID-S36	107°16'58"E	27°53'27"N	198(Cypresses)	5.0	4.8
5	ID-S16	107°26'18"E	28°13'27"N	197(Cypresses)	4.6	4.5
5	ID-Z5	107°18'45"E	28°40'32"N	195(Cypresses)	4.7	4.4
6	ID-B13	106°58'46"E	27°21'06"N	196(Cypresses)	4.1	4.0
6	ID-W13	107°54'42"E	28°57'52"N	199(Cypresses)	4.1	3.9
7	ID-S14	107°09'08"E	28°04'16"N	198(Pinus yunnanensis)	4.2	4.6
7	ID-S4	107°06'27"E	28°18'50"N	193(Pinus yunnanensis)	4.2	4.6
8	ID-B15	106°56'31"E	27°22'29"N	201(Pinus yunnanensis)	3.6	4.1
8	ID-T24	107°02'07"E	28°43'21"N	201(Pinus yunnanensis)	3.6	4.0
9	ID-T25	107°07'19"E	28°44'48"N	198(Pinus yunnanensis)	3.4	3.8
9	ID-T7	106°47'30"E	28°10'24"N	198(Pinus yunnanensis)	3.4	3.8
10	ID-T10	106°48'25"E	28°08'44"N	201(Masson pine)	4.9	4.9
10	ID-X10	106°24'33"E	28°23'26"N	197(Masson pine)	4.9	4.9

Verification team compared the above information they got from the on-site measurement and the raw data from the monitoring survey/14/, CTI concluded that the monitoring results in MR are acceptable and accurate.

Thus in conclusion, the GHG data monitoring follows project own procedures with regard to management and monitoring. Verification team has assessed the information provided by the PP by reviewing the data and information to verify their completeness, the validated monitoring plan in PD, the applied methodology and methodological tools; evaluating the data management and the quality assurance and quality control of the reported GHG removals.

GHG Emission Reduction and Removal Calculations

The GHG removals are calculated according the applied methodology AR-ACM0003 version 02 and validated PD/6/ as below steps,

I. Baseline net GHG removals by sinks

The baseline net GHG removal by sinks are equal to zero as determined in the validated PD.

II. Actual net GHG removals by sinks

The actual net GHG removals by sinks were estimated as the change in the carbon stocks in project occurring in the selected carbon pool, minus the increase in non-CO₂ GHG emissions within the project boundary as a result of the implementation of the A/R CDM project activity (Equation (2) in the applied methodology) and validated PD, which is shown as follows:

$$\Delta C_{ACTUAL,t} = \Delta C_{P,t} - GHG_{E,t} \quad (3)$$

Where:

- $\Delta C_{ACTUAL,t}$ = Actual net GHG removals by sinks, in year t ; t CO₂-e
- $\Delta C_{P,t}$ = Change in the carbon stocks in project, occurring in the selected carbon pools, in year t ; t CO₂-e
- $GHG_{E,t}$ = Increase in non-CO₂ GHG emissions within the project boundary as a result of the implementation of the A/R CDM project activity, in year t , as estimated in the tool "*Estimation of non-CO₂ GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity*"; t CO₂-e

According to the tool, the use of fire for site preparation and/or to clear the land of harvest residue prior to replanting is specifically excluded from the project management and therefore non-CO₂ GHG emissions are estimated as zero.

$$GHG_{E,t} = 0$$

Change in the carbon stocks in project, occurring in the selected carbon pools in year t shall be calculated as follows:

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} + \Delta C_{SHRUB_PROJ,t} + \Delta C_{DW_PROJ,t} + \Delta C_{LI_PROJ,t} + \Delta SOC_{AL,t} \quad (4)$$

Where:

- $\Delta C_{P,t}$ = Change in the carbon stocks in project, occurring in the selected carbon pools, in year t ; t CO₂-e
- $\Delta C_{TREE_PROJ,t}$ = Change in carbon stock in tree biomass in project in year t , as estimated in the tool "*Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities*"; t CO₂-e
- $\Delta C_{SHRUB_PROJ,t}$ = Change in carbon stock in shrub biomass in project in year t , as estimated in the tool "*Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities*"; t CO₂-e
- $\Delta C_{DW_PROJ,t}$ = Change in carbon stock in dead wood in project in year t , as estimated in the tool "*Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities*"; t CO₂-e
- $\Delta C_{LI_PROJ,t}$ = Change in carbon stock in litter in project in year t , as estimated in the tool "*Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities*"; t CO₂-e

$\Delta SOC_{AL,t}$ = Change in carbon stock in SOC in project, in year t , in areas of land meeting the applicability conditions of the tool “*Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities*”, as estimated in the same tool; t CO₂-e

For conservativeness, only change in carbon stock in tree biomass of project will be considered as determined in the validated PD. Therefore, the above equation can be simplified as:

$$\Delta C_{P,t} = \Delta C_{TREE_PROJ,t} \quad (5)$$

And the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activity” (Version 04.2)/46/ is used to estimate the change in carbon stock above the ground. According to the tool, change in carbon stock in trees between two points of time is estimated by using one of the following methods or a combination thereof:

- (a) Difference of two independent stock estimations;
- (b) Direct estimation of change by re-measurement of sample plots;
- (c) Estimation by proportionate crown cover;
- (d) Demonstration of “no-decrease”.

Method (b) has been determined in the validated PD/6/ as per the methodological tool and is used in the monitoring of the following verification.

Thus the change in the carbon stocks in project was estimated as the change in carbon stock in tree biomass following methodological tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” (Version 04.2)/46/, as described below.

a. Estimation of carbon stock in trees biomass

According to the tool, Method (b) (Direct estimation of change by re-measurement of sample plots) is applied for the monitoring during the verification.

Under this method, the change in carbon stock and the associated uncertainty are estimated as follows:

$$\Delta C_{TREE} = \frac{44}{12} \times CF_{TREE} \times \Delta B_{TREE} \quad (6)$$

$$\Delta B_{TREE} = A \times \Delta b_{TREE} \quad (7)$$

$$\Delta b_{TREE} = \sum_{i=1}^M w_i \times \Delta b_{TREE,i} \quad (8)$$

$$u_{\Delta C} = \frac{t_{VAL} \times \sqrt{\sum_{i=1}^M w_i^2 \times \frac{s_{\Delta b,i}^2}{n_i}}}{|\Delta b_{TREE}|} \quad (9)$$

Where:

ΔC_{TREE} = Change in carbon stock in trees between two successive measurements; t CO₂-e

CF_{TREE} = Carbon fraction of tree biomass; t C/t d.m.

ΔB_{TREE} = Change in biomass within the biomass estimation strata; t d.m.

A_i	=	Sum of the area of the biomass estimation strata; ha
Δb_{TREE}		Mean change in tree biomass per hectare within the biomass estimation strata; t d.m./ha
w_i	=	Ratio of the area of stratum i to the sum of areas of biomass estimation strata (i.e. $w_i = A_i/A$); dimensionless
$\Delta b_{TREE,i}$	=	Mean change in tree biomass per hectare in strata i ; t d.m./ha
$u_{\Delta C}$	=	Uncertainty in ΔC_{TREE}
t_{VAL}	=	Two-sided Student's t-value for a confidence level of 90 per cent and degrees of freedom equal to $n - M$, where n is total number of sample plots within the tree biomass estimation strata, and M is the total number of tree biomass estimation strata
$s_{\Delta,i}^2$	=	Variance of mean change in tree biomass per hectare in stratum i ; (t d.m. ha ⁻¹) ²
n_i	=	Number of sample plots, in stratum i , in which tree biomass was re-measured

Tree biomass per hectare in a sample plot is estimated by applying one of the plot measurement methods provided in Appendix 1 of the Tool. PP choose the measurement of fixed area plots for the calculation for this project during this monitoring period.

In this method, sample plots of the same size (e.g. or of a hectare) are installed in a stratum. All trees in a sample plot above a minimum dimension are measured and the biomass of each tree is estimated. The biomass of the individual tree is added and the sum is divided by the area of the sample plot to obtain the plot biomass value.

The plot biomass value (i.e. per-hectare tree biomass at the centre of the plot) is estimated as follows (all time-dependent variables relate to the time of measurement):

$$b_{TREE,p,i} = \frac{B_{TREE,p,i}}{A_{PLOT,i}} \quad (10)$$

$$B_{TREE,p,i} = \sum_j B_{TREE,j,p,i} \quad (11)$$

$$B_{TREE,j,p,i} = \sum_l B_{TREE,l,j,p,i} \quad (12)$$

Where:

$b_{TREE,p,j}$	=	Tree biomass per hectare in sample plot p of strata i ; t d.m./ha
$B_{TREE,p,j}$	=	Tree biomass in sample plot p of strata i ; t d.m.
$A_{PLOT,i}$	=	Size of sample plot in strata i ; ha
$B_{TREE,j,p,j}$	=	Biomass of trees of species j in sample plot p of strata i ; t d.m.
$B_{TREE,l,j,p,j}$	=	Biomass of trees l of species j in sample plot p of strata i ; t d.m.

Biomass of a tree in a sample plot is estimated by using the following equations:

$$B_{TREE,l,j,p,i} = V_{TREE,l,p,j,i} \times D_j \times BEF_j \times (1 + R_j) \quad (13)$$

Where:

$B_{TREE,l,p,j,i}$	=	Biomass of tree <i>l</i> of species <i>j</i> in sample plot <i>p</i> of strata <i>i</i> ; t d.m.
$V_{TREE,l,p,j,i}$	=	Stem volume of tree <i>l</i> of species <i>j</i> in sample plot <i>p</i> of strata <i>i</i> , estimated from the tree dimension(s) as entry data into a volume table or volume equation; m ³
D_j	=	Density of tree species <i>j</i> ; t d.m/m ³
BEF_j	=	Biomass expansion factor for conversion of tree stem biomass to above-ground tree biomass, for tree species <i>j</i> ; dimensionless
R_j	=	Root-shoot ratio for tree species <i>j</i> ; dimensionless

Due to the stem volume was designed in the PD/6/ to calculate the tree biomass, allometric equations were used in the MR/1/ as per the tool. This approach is confirmed as in line with the applied methodology and its tools. Also the allometric equation is verified as conservative for the estimation of GHG removals.

For the Stem volume of tree *l* of species *j* in sample plot *p* of stratum *i* $V_{TREE,l,p,j,i}$, the tree dimensions used as entry data into a volume equations are Height of tree ($H_{l,p,j,i}$) and Diameter at breast height of trees ($DBH_{l,p,j,i}$). The following allometric equations are used to calculate the above-ground biomass of each tree species:

Table 4-7 Allometric equations of tree species

Tree species	Allometric equations for above-ground biomass
<i>China fir</i> ¹	$V_{TREE,j} = 000088296 \times D^{(1.94097-0.0044583 \times (D+H))} \times H^{(0.76012+0.0056841 \times (D+H))}$
<i>Masson pine</i>	$V_{TREE,j} = 0.000094602 \times D^{(1.88156-0.0030651 \times (D+H))} \times H^{(0.76840+0.0046574 \times (D+H))}$
<i>Cypresses</i>	$V_{TREE,j} = 0.000085626 \times D^{(1.9148-0.0045828 \times (D+H))} \times H^{(0.74041+0.00668 \times (D+H))}$
<i>Pinus yunnanensis</i>	$V_{TREE,j} = 0.00010729 \times D^{(1.95029-0.0047643 \times (D+H))} \times H^{(0.63241+0.0075891 \times (D+H))}$

The data source of allometric equations is confirmed as DB52/T 702_2011 < The binary standing tree volume table of China fir > /11/, DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation > /12/, DB52/T 773_2012 < The binary standing tree volume table of Cypress > /10/. and DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis > /13/.

Both data source are checked as per the tool of “Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities” (version 01.0)/45/, as stated in this tool, a species-specific or group-of-species-specific allometric equation derived from trees growing in edapho-climatic conditions similar to those in the project area is considered appropriate, and hence can be used for ex post estimation of tree biomass, if at least one of the following conditions is satisfied:

¹ Via checking the formular data source from DB52/T 702_2011 <The binary standing tree volume table of Chinese Fir>, it is confirmed that the project is located in a general production area of Chinese Fir, hence, the formular of $000088296 \times D^{(1.94097-0.0044583 \times (D+H))} \times H^{(0.76012+0.0056841 \times (D+H))}$ which is corresponding to the general production area is applied by the project which is verified as in line with the data source.

- (a) The equation is used in the national forest inventory, or the national GHG inventory, of the host Party;
- (b) The equation has been used in commercial forestry sector of the host Party for ten years or more;
- (c) The equation was derived from a data set of at least 30 sample trees, and the value of coefficient of determination (R^2) obtained was not less than 0.85.

Via checking DB52/T 702_2011 < The binary standing tree volume table of China fir>/11/, DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation >/12/, DB52/T 773_2012 < The binary standing tree volume table of Cypress >/10/. and DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis >/13/, CTI verified that the three data sources are the local standards in Guizhou Province where the projected area located and the equations are used for the national forest inventory in the host country China, so the equations are verified as fulfill the condition (a) thus confirmed as appropriate.

Based on the above calculation equations, CTI concluded that for the four species of the tree, volume equations were used to convert measured Height of trees ($H_{l,p,j,i}$) and Diameter at breast height of trees ($DBH_{l,p,j,i}$) to stem volume of trees for each tree with sampling plot stem volume of each tree in sample plot was converted to above-ground tree biomass using basic wood density and biomass expansion factors, and the above-ground tree biomass was expanded to total tree biomass using root-shoot ratios.

Finally, based on above calculation process, during this monitoring period, for each stratum, the monitoring and calculation results of the carbon stock change is as following,

Table 4-8 The monitoring results based on sample plots

Sample ID	Tree species	Area (ha)	$b_{tree,l}$ (t d.m. ha-1)	W_i	S_i^2	$W_i^2 b_{tree,l,t}$	Number of Plots n_i	S^2_{bTREE}
Proj-1	China fir	19,245.27	12.98	0.38444	15.5540	4.99003	11	0.20898
Proj-2	China fir	8,477.07	8.53	0.16933	4.8547	1.44438	5	0.02784
Proj-3	China fir	3,121	3.27	0.06234	0.0005	0.20385	3	0.00000
Proj-4	Cypresses	500	17.32	0.00999	0.0434	0.17303	3	0.00000
Proj-5	Cypresses	2,345	14.12	0.04684	0.0569	0.66138	3	0.00004
Proj-6	Cypresses	2,226.4	9.88	0.04447	0.0973	0.43936	3	0.00006
Proj-7	Pinus yunnanensis	500	12.23	0.00999	0.0151	0.12218	3	0.00000
Proj-8	Pinus yunnanensis	8,204.4	8.42	0.16389	0.0044	1.37995	3	0.00004
Proj-9	Pinus yunnanensis	2,441.93	6.97	0.04878	0.0020	0.34000	3	0.00000
Proj-10	Masson pine	3,000	12.31	0.05993	0.0916	0.73774	3	0.00011

For the parameters calculation process and results, Refer to ER sheet for details.

Via checking the details calculation in the ER sheet, CTI confirmed that the uncertainty is calculated as 7.88% which is less than 10%, therefore no discount of the mean biomass should be applied according to the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”.

In conclusion, CTI confirmed that the calculation of GHG removals by sink has been carried out in accordance with the formulae and methods described in the validated monitoring plan/6/ and applied methodology and tools.

For this monitoring period, PP claimed the VCUs in vintage as below:

01-January-2016– 31-December-2019

The total GHG removals by sink being claimed for vintage periods and total this monitoring period account as follows:

Period	GHG removals by sink	Buffer 10%	VCUs
01-January-2016 – 31-December-2016	135,346 tCO ₂ e	13,535 tCO ₂ e	121,811 tCO ₂ e
01-January-2017 – 31-December-2017	147,032 tCO ₂ e	14,703 tCO ₂ e	132,329 tCO ₂ e
01-January-2018 – 31-December-2018	271,148 tCO ₂ e	27,115 tCO ₂ e	244,033 tCO ₂ e
01-January-2019 – 31-December-2019	377,305 tCO ₂ e	37,731 tCO ₂ e	339,574 tCO ₂ e
Total	930,831 tCO₂e	93,083 tCO₂e	837,748 tCO₂e

CAR 04, CAR 05 and CAR 06 were raised and successfully closed. Refer to Appendix 3 for details.

4.4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

During the verification assessment, the evidence provided by the PPs was sufficient in both quantity and quality to support the determination of GHG removals reported by the project. The threshold for materiality to the total GHG removals reported was met for this project; materiality is a concept that the errors, omissions and misrepresentations could affect the GHG removals assertion and influence the intended users. As defined by VCS version 4.0, the materiality will be 5%.

The source and nature of the evidence (external or internal, oral or documented) for the determination of GHG emission reductions or removals has been assessed and verified in above section 4.4.1 together with each calculation step, thus the reliability of the evidence is confirmed. The evidence provided to determine GHG removals reported in the Monitoring Report included values, notations, units and sources; the evidences has been cross-checked with supplied GHG removals calculation spreadsheet/3/.

The procedure for data generation and aggregation, recording, transfer and final transposition into the MR was also verified and found to be in compliance with the monitoring plan in the validated PD.

For the measuring devices, the confirmation of no need to conduct calibration has been assessed and verified in above section 4.4.1 together with the assessment of monitoring parameters, the implemented approach is verified as appropriate and in line with the national regulations.

Therefore CTI confirmed through cross-checks that adequate monitoring mechanism are in place where the required parameters need to be monitored, and the quantity and quality of the

evidence used to determine the GHG reductions and removals is concluded as sufficient and appropriate.

4.4.3 Non-Permanence Risk Analysis

The project utilized the VCS Procedural Document “AFOLU Non-Permanence Risk Tool” (version 4.0)/49/ to assess risk according to internal risk, external risk, natural risk and mitigation measures for minimizing risk. At all levels has been evaluated the rationale, appropriateness and justifications of risk rating chosen by PPs.

Each risk category was calculated based on the VCS guidance and the input provided by the PPs. The risk has been reassessed at time of the first verification and with that prior to any issuance of VCUs. The information was verified and cross-checked through document and literature review/9/,/8/,/28/, onsite visits of the project area and interviews conducted/11/. Details of the assessment are provided as follow.

Risk factor	Verification findings
Internal risks	
Project management	The management team includes individuals who have successfully managed projects through validation of GHG credits under the CDM, CCER, VCS Program/70/,/ccer/,/69/, therefore this mitigation is scored as -2. There is a specific mitigation plan made by project proponent for potential risks to the project, which includes a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in this monitoring period, which has been verified in the Monitoring Manual/41/, therefore this mitigation is scored as -2.
Financial viability	According to the reported barren hills and wasteland data in the project design/8/, the forestry departments at all levels counted and approved the afforestation area, and allocated the funds and provincial-level funds and local funds issued by the state to the counties. So project cash flow breakeven point is greater than 10 years from the current risk assessment. The cash out of the project is mainly for implementation of the project during the first three years, which has been fully secured by the project owner and buyer. Therefore this mitigation is scored as 6.
Opportunity cost	The NPV from the project is negative while the NPV from the most reasonable alternative land use activity (the land continued to be barren with no use) is zero. Therefore this mitigation is scored as 0.
Project longevity	Since the main tree species planted in the project are China fir, Cypresses, Pinus yunnanensis and Masson pine which all have Suitable for the growth of Karst landforms, therefore the project longevity selected 30 years/34/ and the crediting period is selected to be 29 years. Therefore this mitigation is scored as 0.
External risks	
Land tenure and resource access/impact	Project Approval/9/ is checked, CTI verified that the land of the project is all collective-owned, and the project proponent holds a concession for operating and management of the forest on the land.

	Therefore this mitigation is scored as 0.
Community Engagement	The project land are mostly barren land by checking the baseline survey/17/, no residents living within the project area/CBSR/. And for the households living within 20km of the project boundary outside the project area, nearly all of them have been consulted during the Participatory Rural Appraisal/20/ of the project and the community monitoring survey by questionnaires. According to the PRA report and filled questionnaires, the project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area during this monitoring period. Therefore this mitigation is scored as -5.
Political Risk	The project is located in China. According to World Bank Institute's WGI, the six indicators of China are respectively -0.30, 0.30, -0.47, -0.25, -0.39 and -1.59, averaged over the most recent five years, so the mean score is -0.45. Governance Score is -0.45 then the final score is 4. China has an established Designated National Authority under the CDM and has at least one registered CDM Afforestation/Reforestation project, therefore this mitigation is scored as -2. Total Score is 2.
Natural risks	
Fire	Major. Fire risk is considered low in the early phase of the project because planting area is mostly barren land, after the trees grow to a certain age (over 30 years), the risk of fire may increase, and the project proponent will adopt the necessary measures for fire preventing. Thus, LS= 2 Furthermore, local government sets the fireproofing period when using fire is forbidden in the open air and no fires occurred in the project areas for this monitoring period as confirmed during the on-site visit. Also the fire will be strictly controlled by project proponent who experienced in local natural risk control to minimize the potential effect and established fire prevention procedure in Integrated Forest Management Manual/28/. Therefore the mitigation is scored as 0.25.
Pest and disease outbreaks	Insignificant. According to historical records, the pest and disease risk are not common, and the mixed plantation will prevent the trees from pest and disease outbreaks in a certain way based on technical experience. Hence the risk is less than every 10 years. LS=2 The planted trees may would be damaged by insects and disease, but the risk is considered low because it can be prevented by routine overseeing and the PP have in place a full Integrated Forest Management Manual/28/. The biological measures to control pests and diseases will be mainly adopted. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide will be strictly managed by well trained staff to minimize the potential effect/28/. As the biological measures to control pests and diseases will be

	mainly adopted, the pesticide application will be limited. During this monitoring period, there was no pest and disease risk occurred which is confirmed by checking the daily log of the technicians/24/ and interview with the officer from local forest bureau and local residents. Therefore the mitigation is scored as 0.25.
Extreme Weather	Minor There is basically no extreme weather in the project area based on weather reports collected from historic records from local government/71/; and there was no extreme weather in the project area during this monitoring period as confirmed by checking the historic records for this monitoring period from local government/71/ and interview with the officer from local forest bureau and local residents. LS=1. Therefore the mitigation is scored as 0.25.
Geological risk	Minor The geological risk such as earthquakes around the project area are mostly low intensity, so the damage will be minor. According to historical records from local government/71/, there is no earthquakes or volcanoes occurred in recent 30 years around the project area as confirmed during the on-site interview with local officer. And there was no geological risk in the project area during this monitoring period as confirmed by checking the historic records for this monitoring period from local government/71/ and interview with the officer from local forest bureau and local residents. LS=1. Furthermore, local government will be responsible for the recovery of the forest if there is an earthquake occurred as confirmed during the on-site visit. Also the project proponent is experienced in local natural risk control to minimize the potential effect and established specific instruction in geological risk control in Integrated Forest Management Manual/28/. Therefore the mitigation is scored as 0.25.
Other risks	None is observed.

In summary, the PPs have accounted for risk factors in a reasonable manner and have reached an overall risk rating that encompasses all risks of non-permanence; the project is able to effectively manage risks to project benefits during the monitoring period and project lifetime. Risk mitigation strategies were confirmed to have been implemented as planned in the validated PD and are summarized in the non-permanence risk assessment conducted by the project. During the verification activity no additional risks to project benefits are identified.

The overall risk rating according to the applied tool is 10%. The validation team concludes that this risk rating is purely based on the tool cited above, according to VCS requirements.

The non-permanence risk report/4/ and Risk Calculation Sheet/5/ are provided by PP. The risk analysis is assessed for its appropriateness. The overall risk rating for the specific monitoring period is 10% and it represents the buffer applied (VCUs that must be deposited in the AFOLU pooled buffer).

4.4.4 Dissemination of Monitoring Plan and Results (CL4.2)

The monitoring results, monitoring plan and summary of the monitoring report in local language, have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the monitoring plan and monitoring manual have been distributed among local stakeholders by PP and local government which is confirmed and verified by interview with the local stakeholders.

Furthermore, the project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching/22/ and seen by verification team during site inspection.

Finally, meetings with stakeholders have been carried out during site verification. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders/23/.

In conclusion, the results of climate monitoring were disseminated in accordance with the validated project description.

4.4.5 Optional Gold Level: Climate Change Adaptation Measures (GL1.3)

N/A

4.4.6 Optional Gold Level: Climate Change Adaptation Benefits (GL1.4)

N/A

4.5 Community

4.5.1 Community Impacts (CM2.1)

The analysis of the net benefits to the communities is conducted making comparison with the baseline scenario. The asset which are assessed are the human capital, social capital, physical capital, financial capital, natural capital and no negative well-being impacts have been identified, while it is expected that the forest will generate benefits on the quality of the environment and on living conditions of the local residents and workers. By the interview with the project implementer, technicians and local stakeholders, this was confirmed. Being the monitoring period mostly related to the retroactive period, the analysis and the assessment did at the time of the project validation is not changed.

The MR states that the project generated positive community impacts during this monitoring period through improve living environment, increasing household income, prevention of deteriorating living conditions and climatic relocations with less and less villagers are forced to move out of their homes so that to provide actual and direct benefits to community group-local villagers including women, and increased the collective cohesion of the village and improve the working methods of the villagers so that to provide actual direct benefits to community group-village committees in project area, also achieve goals in afforestation and increase forest cover,

promote forest management and protection, and need more time for training and forest management to be beneficial to the local forest bureaus, and improve the local ecological environment and improve people's living level to be beneficial to the local governments. These impacts are confirmed include all those identified in the project description/6/.

The analysis of the net benefits to the community groups is conducted to each category of community groups as identified in the PD/6/. Each benefit has been verified by checking the labor contracts/36/, periodical payroll/37/, training records/42/ during this monitoring period and on-site observation and interview with local officers/12/, residents/13/, workers/13/ and women/13/.

Hence, CTI concluded that all the impacts for each community group identified in the project description were accurate during this monitoring period.

CAR 07 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.2 Negative Community Impact Mitigation (CM2.2)

As per the validated PD/6/ and confirmed by the project implementer/11/, local residents/13/ and technicians/13/ during the interview, the project does not generate negative impacts on communities and are not expected given the nature of the project. Being the monitoring period mostly related to the retro-active period, the analysis and the assessment did at the time of the project validation is not changed.

4.5.3 Net Positive Community Well-being (CM2.3)

As stated in §4.5.1 of this report, the project is designed and implemented to produce net positive well-being impacts on local communities. The MR states that the project is implemented to produce net positive well-being impacts on local communities as designed in the validated PD/6/.

It states that project generates positive community impacts through overcoming poverty by providing job, creating more local job opportunities and reduce migrant rural workers by providing permanent and temporary job, improving gender equity by providing more jobs to women than men, promoting technical and economic capability of local communities by providing related trainings and skills and enhancing social cohesion by organizing local culture activities, so that to provide actual direct benefits to community group-local villages.

The positive impacts including change to economic indicators of the region, the cultural and economic history of the mentioned communities and the interactions between the communities, also changes on the ecosystem services, the expected changes in the well-being conditions and other characteristics of communities are stated in the MR as per validated PD/6/. Descriptions in MR has been checked, CTI verified that the impacts on the community groups in this monitoring period is correct via checking actual labor contracts/36/, periodical payroll/37/, training records/42/ during this monitoring period and by site inspection and interview with local stakeholders/13/ and local officers from government/12/.

Via checking the project implementation comparing with the project design, CTI verified that the expected changes is reasonable and can be achieved.

Being the monitoring period mostly related to the retroactive period, the analysis and the assessment did at the time of the project validation is not changed. Thus CTI concluded that the net impact of project activities on community groups is all positive.

4.5.4 Protection of High Conservation Values (CM2.4)

No HCVs was identified related to community well-being in the project zone based on above assessment and assessed in the validated PD/6/, thus none of the HCVs related to community well-being will be negatively affected by the project.

4.5.5 Other Stakeholder Impacts (CM3.2-CM3.3)

The MR states that no negative offsite effects are expected during this monitoring period same as the validated PD/6/. Oppositely, the project provides valued experience of forest management and carbon trading to other stakeholder, which in some way could encourage more followers to engage in similar projects for sustainable development. The local officer/I2/ and technicians/I3/, during the on-site visit and the interview, confirmed that the project did not result in net negative impact on other stakeholders during this monitoring period. Being the monitoring period mostly related to the retro-active period, the analysis and the assessment did at the time of the project validation is not changed.

4.5.6 Community Monitoring Plan (CM4.1, CM4.2, GL2.2, GL2.3, GL2.5)

The PP carried out the community monitoring as per established community monitoring plan in the validated PD/6/.

To validate the community monitoring results during this monitoring period, the verification team take stepwise verification as following,

a. Check the dates, frequency and method as per PD

As designed in the validated PD/6/, the monitoring parameters reflect the actual changes in well-being resulting from the project activities for community groups were measured and monitored by interview for each community groups affected by the project and collect all the relevant information through questionnaires.

During this monitoring period, the project owner established a monitoring team including all the technicians conducting interviews with local communities affected by the project, this has been confirmed by site interview with the technicians/I2/ and local stakeholders/I3/.

As per the frequency defined in the PD/6/, the monitoring should be conducted before every verification event, the monitoring team distributed 110 questionnaires to collect the interview results for the representatives of local residents living in project zone from October to November in 2019 and got 110 valid questionnaires back/27/, thus CTI verified that the monitoring frequency is in line with the validated PD design/6/.

b. Check the monitoring results

Via checking the 110 questionnaires/27/ collected by monitoring team, CTI verified that the questionnaires were distributed to different community groups as defined in the PD including Local villagers, female workers, local officers from forest bureau and governments, representatives from local village committees, and the key variables set in the questionnaire are in line with the plan in validated PD/6/.

Via comparing the information in the questionnaires/27/, CTI verified that monitoring results listed in the MR is correct and actual.

c. Evaluation of monitoring

The monitoring procedures and approaches during this monitoring period were carried out as listed in the PD/6/, via checking the results, CTI verified that PP established a series of procedures including organizing monitoring team, training, preparation and survey. The sub procedures are verified as capable to finish this monitoring, which is confirmed by interview with the monitoring team member/11/,/13/,/14/ and based on the experience of the monitoring team.

By combining the information in the questionnaires/27/, CTI confirmed that during this monitoring period,

97% of Local Villages believe that after the implementation of the project, the living environment has improved, and family income has also increased. There is no need to leave their homes to work outside;

94% of the technicians believe that after the implementation of the project, the abilities and technical skills of the villagers have been improved through annual technical training, with stable jobs and corresponding increases in income;

96% of local village committees believe that social cohesion between communities has been enhanced;

97% of government officials believe that after the implementation of the project, the local economic environment has been improved; the living standards of local villages have also been improved;

100% of the forestry bureau staff believe that the implementation of the project has promoted the improvement of local forest management and forest protection, the forest coverage rate was significantly improved, and the project's expected goal was reached.

During the on-site verification, stakeholder meeting with different community groups has been carried out on 27-September-2020 through meeting and interview. During the meeting, the affected community group representatives are interviewed separately by verification team, and all the representatives confirmed that the project generated positive community impacts during this monitoring period through improve living environment, increasing household income, prevention of deteriorating living conditions and climatic relocations with less and less villagers are forced to move out of their homes so that to provide actual and direct benefits to community group-local villagers including women, and increased the collective cohesion of the village and improve the working methods of the villagers so that to provide actual direct benefits to community group-village committees in project area, also achieve goals in afforestation and increase forest cover, promote forest management and protection, and need more time for training and forest management to beneficial to the local forest bureaus, and improve the local ecological environment and improve people's living level to beneficial to the local governments.

Based on above evaluation from the affected communities, and by checking the information in the questionnaires/27/, CTI verified that the monitoring results reflect the actual community impact from each community groups affected by the project.

Thus CTI concluded that the community monitoring during this monitoring period was carried out in accordance to the validated project description/6/ and the impacts identified in the PD are all achieved during this monitoring period.

CAR 08 was raised and successfully closed. Refer to Appendix 3 for details.

4.5.7 Community Monitoring Plan Dissemination (CM4.3)

The community monitoring results, community monitoring plan have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the community monitoring plan and community monitoring manual have been distributed among local stakeholders by PP and local government which is confirmed and verified by photo check/22/ and interview with the local stakeholders.

Furthermore, the project implementer published community monitoring plan and community monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching/22/ and seen by verification team during site inspection.

Finally, interviews with stakeholders have been carried out during site verification. During the interview, project implementer introduced the community monitoring results during this monitoring period and copies of community monitoring results is available to anyone requests it. Verification team has participated and the results are also verified by checking the interview minute and questionnaires filled by stakeholders/23/.

In conclusion, the results of community monitoring were disseminated in accordance with the validated project description.

4.5.8 Optional Gold Level: Short-term and Long-term Community Benefits (GL2.2)

N/A

4.5.9 Optional Gold Level: Smallholder/community member Risks (GL2.3)

N/A

4.5.10 Optional Gold Level: Marginalized and/or Vulnerable Community Groups (GL2.4)

N/A

4.5.11 Optional Gold Level: Net Impacts on Women (GL2.5)

N/A

4.5.12 Optional Gold Level: Benefit Sharing Mechanisms (GL2.6)

N/A

4.5.13 Optional Gold Level: Governance and Implementation Structures (GL2.8)

N/A

4.5.14 Optional Gold Level: Smallholders/Community Members Capacity Development (GL2.9)

N/A

4.6 Biodiversity

4.6.1 Biodiversity Changes (B2.1)

The monitoring report states that the project seeks to change the biodiversity intact through the Scientific and rational afforestation of degraded or barren land.

PP evaluated the biodiversity element of species of plants and animals as per the validated PD, it is considered as appropriate to the project to identify and quantify the native species of plants and animals within the project boundary.

A list of biodiversity variables is reported in the monitoring report and the justification used to attribute biodiversity changes to the project's activities was assessed by verification team as following,

1. For Species of plants, besides the four successfully grew species of the tree to establish an artificial forest, CTI verified that there were many crops, herb, shrub, bushes and grasses growing around the planted trees which has significantly increased the plant cover during this monitoring period, and this is also verified by on-site inspection to the sample plots and remote observation of the project area and checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/19/.
2. For number of animals, due to the actual impact is difficult to measure during monitoring period with short time, the change is mainly based on the corridor created by the project plant cover, which connected forests and extend the wildlife habitat areas, thus finally benefit the species of animals in the project zone. Via checking the biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences/19/, CTI verified that there are 8 animals' traces were observed and one of them was photographed around the monitoring points and sample spots, which could prove the increase of animals during this monitoring period, and this is also verified by on-site inspection to the monitoring points and sample spots and remote observation of the project area.

In conclusion, the project's assessment of changes in biodiversity resulting from project activities in the project zone during the monitoring period are verified as accurate. There is no reason to believe the project area remains less rich in biodiversity than the project start.

4.6.2 Mitigation Actions (B2.3)

As verified in the validated PD/6/, it is proved that the project has no negative impacts on biodiversity and thus no special measures need to be taken for maintenance or enhancement of biodiversity and high conservation value attributes.

Afforestation in this project uses local species which is confirmed in PD/6/, implement afforestation activity through scientific and reasonable method with no burning and slash, and protect the existing vegetation as much as possible and no invasive species were introduced in the project which has been determined in the project design and confirmed by site inspection.

Therefore, CTI concluded that no negative impacts on biodiversity or HCV attributes recorded, so no measures were necessary to mitigate impacts, beyond the routine operation of the project.

4.6.3 Net Positive Biodiversity Impacts (B2.2)

The local tree species plantation has different positive impact on soil, climate and biodiversity; when local tree species are planted in degraded areas, an increase of flora and fauna biodiversity can be recorded. This afforestation activity is implemented with scientific and reasonable configuration method, with no burning and slash and reduce the fire and insect risk. With the planted trees gradually grow up to forest, project sites have become ecological community with the domain species of trees, which has improved biodiversity. Above assessment have been demonstrated in the section 4.6.1.

Furthermore, via on-site investigation and checking the map/40/, CTI verified that as the project site is located in 1 district and 7 counties of Zunyi City of Guizhou Province, the surrounding area is concentrated of wildlife. Therefore revegetation of project sites facilitates biodiversity protection of the whole project zone confirmed by checking the biodiversity survey report/19/.

Based on the situation of biodiversity within the project zone at baseline scenario, the project area will continue to be barren or degraded land and with low biodiversity condition. The main change by the project scenario is to create forest cover of the project area with local native species which has great vitality and adaptation to project zone, this has been verified by site inspection.

The local tree species plantation has different positive impact on soil, climate and biodiversity; when local tree species are planted in project areas, an increase of flora and fauna biodiversity can be recorded, including species of animals could be increased and original wild animals around project area can be protected. As per the validated PD, 10 national protected species inhabit in the nature reserve, one of them is globally endangered species according to IUCN/61/. These species benefit from reduced threats as a result of the project activity.

These will be protected by the improvement on ecological environment of the surrounding area through the project activity implementation, the improvement on ecological environment of the surrounding area has been confirmed during the site observation.

Besides, this afforestation activity is implemented with scientific and reasonable configuration method, with efficient measures of fire prevention and insect control. And via on-site interview with local residents, technicians and officers, CTI verified that there was no fire and insect disaster occurred during this monitoring period in project area.

In conclusion, the net impact of the project's activities on biodiversity are positive.

CAR 09 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.4 High Conservation Values Protected (B2.4)

No HCVs has been identified related to biodiversity based on above assessment and in line with the validated PD/6/.

4.6.5 Invasive Species (B2.5)

The species used is native trees developed in China which is verified by validated PD/6/ and onsite observations. These are not considered as invasive species. In conclusion, all the planted trees are native species and no invasive species have been introduced into any area affected by the project.

4.6.6 Impacts of Non-native Species (B2.6)

Only native species are used in the project activities which is defined in the PD/6/ and verified by checking the Seedling Purchase Contract/30/ and onsite observations, thus there are no adverse effects from non-native species.

4.6.7 GMO Exclusion (B2.7)

The PPs declared and assured that no GMOs has been and will be used in the project to generate GHG emissions reductions or removals which is defined in the PD/6/ and verified by checking the Seedling Purchase Contract/30/ and onsite observations.

4.6.8 Inputs Justification (B2.8)

As assessment to the validated PD, CTI verified that no fertilizers were used in the project during this monitoring period, chemical pesticides are allowed to be used only if there is a serious disease problem erupted in the project area, biological control agents are used in the project according to local Pest Control and Prevention Policy/28/. The chemical pesticides are allowed to be used only if there is a serious pest problem erupted in the project area, while improper pesticide application would be harmful to natural environment, but the risk is considered low because pesticide is strictly managed by well trained staff to minimize the potential effect/28/. As the biological measures to control pests and diseases was mainly adopted, the pesticide application was limited during this monitoring period. Via on-site interview with the project implementer and local officers, CTI verified that there was no significant pesticide application occurred as no insects and disease disaster occurred.

Therefore, CTI concluded that the use of each input is justified as per the PD/6/ and did not pose harm to the region's environment or communities during this monitoring period.

4.6.9 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Actions (B3.2)

The MR/1/ and PD/6/ both state that no potential negative impacts on biodiversity outside of the project zone would resulting from project activities; the project contributes to the conservation of the biodiversity and ecosystem. No actual impacts were observed during the site visit and/or reported during the monitoring period. Refer to 4.6.1 and 4.6.3 of this report for detail assessment.

4.6.10 Net Offsite Biodiversity Benefits (B3.3)

Net biodiversity impacts from a project that protects habitat within a project area is unlikely to be anything but neutral.

4.6.11 Biodiversity Monitoring Plan (B4.1, B4.2, GL3.4)

The PP carried out the biodiversity monitoring as per established biodiversity monitoring plan in the validated PD/6/.

To validate the biodiversity monitoring results during this monitoring period, the verification team take stepwise verification as following,

- a. Check the dates, frequency and method as per PD

As designed in the validated PD/6/, the monitoring parameters reflect the actual changes of biodiversity were measured and monitored by survey variables for biodiversity during this monitoring period as stated in the MR.

During this monitoring period, the project owner established a monitoring team including all the 95 technicians conducting biodiversity survey affected by the project, all technicians have performed biodiversity monitoring during the monthly forestland inspection to record the discovery of any biodiversity including both flora and fauna. This has been confirmed by site interview with the monitoring team member/I3/.

As per the frequency defined in the PD, the monitoring should be conducted during each verification, the monitoring team conducted site survey from start date of the crediting period since Jan. 2016, thus CTI verified that the monitoring frequency is in line with the validated PD design/6/.

b. Check the monitoring results

Via checking the biodiversity survey report/19/ completed by Guizhou province academy of social sciences based on the monitoring results by monitoring team, CTI verified that the monitoring approach used for investigation is as per the design defined in the PD/6/. Fixed sample plots have been set to monitor the species of vegetation and animal population associated with forest (birds) which were the same as the sample plots set for monitoring of climate.

The sample plots are confirmed as fixed for the whole project lifetime for monitoring the change of the biodiversity which is considered as reasonable and appropriate.

Via comparing the information in the biodiversity survey report/19/, CTI verified that monitoring results listed in the MR is correct and actual.

c. Evaluation of monitoring

The monitoring procedures and approaches during this monitoring period were carried out as listed in the PD/6/, via checking the results, CTI verified that PP established a series of procedures including organizing monitoring team, training, preparation, determination of the sample plots and survey. The sub procedures are verified as capable to finish this monitoring, which is confirmed by interview with the monitoring team member/I3/ and based on the expertise of the monitoring team.

By checking the information in the biodiversity survey report/19/ and biodiversity monitoring spreadsheets filled by the technicians/18/, CTI confirmed that the monitoring indicators are confirmed as consistent with the net positive change which created by the project.

Three indicator types which covering PRS (Pressure, State, and Response) scope have been listed.

For the State variables, forest cover, species of flora and fauna biodiversity has been monitored. the area of forest cover increases 50,061 ha, and the species of vegetation are 4 types of plant with a total number of 48 quadrats, the species of animals are traced as 2 types of birds and 1 types of mammal with a total number of 8 in this monitoring period.

For the Pressure variables, the risk to the project and the harmful impacts to biodiversity, indicators of fire, insects and disease has been monitored annually through examined by the forest rangers and confirmed by local Forest Bureau. Via site inspection and interview with the

officer from Forest Bureau, CTI verified that no fires occurred, and effected forest area suffered insects and disease are none/18/ in this monitoring period.

For the Response variables, forest area under control, recovered from control and trees replanted have been monitored to reflect the project interventions relevant to biodiversity in this monitoring period. These have been monitored annually through examined by the forest rangers and confirmed by local Forest Bureau. Via site inspection and interview with the officer from Forest Bureau, CTI verified that 50,061 ha forest area are under prevention control from fires, insects and diseases. And none of forest area recovered from fire, insects or diseases which has been verified by checking the biodiversity survey report/19/ and biodiversity monitoring spreadsheets/18/.

During the on-site verification, the verification team investigated the sample spots and measured the vegetation to confirm the PP monitoring results, through comparing the both results, CTI verified that the values are almost same.

Based on above evaluation from the biodiversity monitoring, CTI verified that the monitoring results reflect the actual biodiversity impact from each species affected by the project.

Thus CTI concluded that the biodiversity monitoring during this monitoring period was carried out in accordance to the validated project description.

CAR 10 was raised and successfully closed. Refer to Appendix 3 for details.

4.6.12 Biodiversity Monitoring Plan Dissemination (B4.3)

The biodiversity monitoring results, biodiversity monitoring plan have been made publicly available on the VCS and CCB website, which can be confirmed by checking the corresponding webpage.

In addition, hard copies of the biodiversity monitoring plan and biodiversity monitoring manual have been distributed among local stakeholders by PP and local government, also all the technician explained how the project was monitored, which is confirmed and verified by interview with the local stakeholders.

Furthermore, the project implementer published biodiversity monitoring plan and biodiversity monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching/22/ and seen by verification team during site inspection.

Finally, meeting with stakeholder had been carried out during site verification. During the meeting, project implementer introduced the biodiversity monitoring results during this monitoring period and copies of biodiversity monitoring results is available to anyone requests it. Verification team has participated and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders/23/.

In conclusion, the results of biodiversity monitoring were disseminated in accordance with the validated project description.

4.6.13 Optional Gold Level: Trigger Species Population Trends (GL3.3)

N/A

4.6.14 Optional Gold Level: Effectiveness of Threat Reduction Actions (GL3.4)

N/A

4.7 Additional Project Implementation Information

No additional project implementation is relevant for reporting here as details on project implementation are included in preceding sections.

4.8 Additional Project Impact Information

The project has been able to demonstrate impacts to all CCB indicators as mentioned throughout this report; no further steps to verify additional monitoring were warranted. The reported project impact information was sufficient and suitable for the verification of the project's CCB impacts.

5. VERIFICATION CONCLUSION

Shanghai Libra Investment & Management Co., Ltd has commissioned Shenzhen CTI International Certification Co., Ltd to carry out the Verified Carbon Standard (VCS) joint with Climate, Community & Biodiversity (CCB) 1st periodic verification of the project activity Qianbei Afforestation Project in China, VCS reference No. 2082, for the period 01-January-2016 to 31-December-2019, with regard to the relevant requirements for VCS and CCBS.

Based on the documented evidence and corroborated by an on-site assessment, CTI can confirm that:

- the project has been implemented and operated as per the validated PD/6/;
- there is no project description deviation identified for this monitoring period;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS and CCB requirement;
- the monitoring is in place as per the applied baseline and monitoring methodology/44/;
- the monitoring complies with the monitoring plan in the validated PD/6/;
- the project complies with the verification criteria for projects set out in the Third Edition of the CCB Standards

The GHG removals by sink were calculated correctly on the basis of the approved monitoring methodology AR-ACM0003 Afforestation and reforestation of lands except wetlands, version 02.0 and the monitoring plan in the validated PD. And the positive impacts to community and biodiversity are achieved during this monitoring period as defined in the validated PD.

It is certified that the GHG removals by sink from the project during the monitoring period amount as follows:

Monitoring period: From 01-January-2016 to 31-December-2019

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-January-2016 – 31-December-2016	0	135,346	0	135,346
01-January-2017 – 31-December-2017	0	147,032	0	147,032
01-January-2018 – 31-December-2018	0	271,148	0	271,148
01-January-2019 – 31-December-2019	0	377,305	0	377,305
Total	0	930,831	0	930,831

For the total Monitoring period 01-January-2016 to 31-December-2019: the value is gross of the 10% (93,083 tCO₂e) buffer withholding based on the non-permanence risk assessment tool. This results in **837,748 tCO₂e** equivalent of credits eligible for issuance as VCU.

Shunrong Lin

Lin Shunrong
CTI
Validation Team Leader
20-October-2020

Zhou Lu

Zhou Lu
CTI
Final Approval
20-October-2020

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
ARR	Afforestation, Reforestation and Revegetation
AFOLU	Agriculture, Forestry and Other Land Use
BAU	Business as usual
CAR	Corrective Action Request
CCB	Climate, Community & Biodiversity
CCBA	Climate, Community & Biodiversity Association
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CP	Certification Program // Crediting Period
DNA	Designated National Authority
EB	CDM Executive Board
ER	Emission Reductions
ETS	Emission Trading Scheme
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GMO	Genetically modified organism
GS	Gold Standard
HCVs	High Conservation Values
IFM	Improved Forest Management
IPCC	Intergovernmental Panel on Climate Change
JNR	Jurisdictional and Nested REDD+
MP	Monitoring plan
MR	Monitoring Report
NDRC	National Development and Reform Commission
NPRA	Non-Permanence Risk Analysis
PD	Project Description
PP	Project Participant
PRA	Participatory Rural Appraisal
QC/QA	Quality control/Quality assurance
REDD	Reduced Emissions from Deforestation and Degradation
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VVB	Validation/Verification Body

APPENDIX 2: DOCUMENTS REVIEWED OR REFERENCED

No.	Author	Title	References to the document	Provider
1.	Shanghai Libra Investment & Management Co., Ltd	Monitoring report	1 st periodic Monitoring report of “Qianbei Afforestation Project” Draft Version No. 01, dated 17/09/2020 Final Version No. 02, dated 18/10/2020	Shanghai Libra Investment & Management Co., Ltd
2.	Shanghai Libra Investment & Management Co., Ltd	Monitoring report Summary in Chinese version	1 st periodic Monitoring report summary in Chinese version of “Qianbei Afforestation Project” Draft Version No. 01, dated 13/09/2020 Final Version No. 02, dated 18/10/2020	Shanghai Libra Investment & Management Co., Ltd
3.	Shanghai Libra Investment & Management Co., Ltd	Net anthropogenic GHG removals by sinks calculation spreadsheets	Net anthropogenic GHG removals by sinks calculation spreadsheets of “Qianbei Afforestation Project” for 2016, 2017, 2018 and 2019 Draft Version No. 01, dated 17/09/2020 Final Version No. 02, dated 18/10/2020	Shanghai Libra Investment & Management Co., Ltd
4.	Shanghai Libra Investment & Management Co., Ltd	Non-permanence risk report	Non-permanence risk report for this monitoring period, Version No. 01, dated 18/09/2020	Shanghai Libra Investment & Management Co., Ltd
5.	Shanghai Libra Investment & Management Co., Ltd	Risk Calculation Sheet	Risk Calculation Sheet for this monitoring period, Version No. 01, dated 18/09/2020	Shanghai Libra Investment & Management Co., Ltd
6.	Shanghai Libra Investment & Management Co., Ltd	Project Description	Approved Project Description of “Qianbei Afforestation Project” (Version No. 03, dated 09/07/2020)	Shanghai Libra Investment & Management Co., Ltd
7.	CTI	Validation report	Approved Validation report of “Qianbei Afforestation Project” (Version No. 02, dated 09/07/2020)	VCS website
8.	Guizhou Forestry Investigation and Design Co., Ltd.	Afforestation Project Design Report	Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2015 on 10/01/2015 Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2016 on 20/01/2016 Afforestation Project Design Report for project activity issued by Guizhou Forestry Investigation and Design Co., Ltd. for year 2017 on 10/01/2017	PP
9.	Zunyi City Forest Bureau	Approval of afforestation project design	Approval of afforestation project design approved by Zunyi City Forest Bureau on 19/01/2015 for year 2015 Approval of afforestation project design approved by Zunyi City Forest Bureau 22/02/2016 for year 2016 Approval of afforestation project design approved by Zunyi City Forest Bureau 20/01/2017 for year 2017	PP

10.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>Cypresses</i>	DB52/T 773_2012 < The binary standing tree volume table of Cypress >	PP
11.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>China fir</i>	DB52/T 702_2011 < The binary standing tree volume table of China fir>	PP
12.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>Masson pine</i>	DB52/T 703_2011 < The binary standing tree volume table of Pinus Massoniana plantation >	PP
13.	Quality and Technical Supervision Bureau in Guizhou Province	Allometric equations of <i>Pinus yunnanensis</i>	DB52/T 763_2012 < The binary standing tree volume table of Pinus yunnanensis >	PP
14.	Technicians	Field Survey Records	Field survey records for carbon sink monitoring by monitoring team during every Jan from year 2017 to 2020	PP
15.	Guizhou Provincial Academy of Social Sciences	Biodiversity Survey Report	Biodiversity Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Feb. 2015	PP
16.	Local Administration for Industry and Commerce	Business License	Business License of all the participants of the project	PP
17.	Guizhou Provincial Academy of Social Sciences	Baseline Survey Report	Baseline Survey Report issued by Guizhou Provincial Academy of Social Sciences in Sep. 2014	PP
18.	Technicians	Biodiversity monitoring spreadsheets	Biodiversity monitoring spreadsheets filled by the technicians during this monitoring period	PP
19.	Guizhou province academy of social sciences	Biodiversity survey report	Biodiversity survey report for this monitoring period issued by Guizhou province academy of social sciences dated 15/07/2020	PP
20.	Guizhou Provincial Academy of Social Sciences	Participatory Rural Appraisal	Participatory Rural Appraisal (PRA) report of the project issued by Guizhou Provincial Academy of Social Sciences on 24/02/2015	PP
21.	Local stakeholders	Questionnaires in PRA	PRA and CCB questionnaires filled out by villagers	PP
22.	PP	Routine villager assembly record	Photos of routine villager assembly for access to the monitoring records for each of the 169 villages of the 1 district and 7	PP

			counties	
23.	PP	Verification Site Meeting Records	Verification Site meeting/interview Records including interview minute and questionnaires filled by stakeholders	PP
24.	Technicians	Working log	Working log recorded by the technicians which including the forest management work record, stakeholder consultation process and results	PP
25.	Specific staff	Conflicts and grievances	Conflicts and grievances of local communities and individual villagers	PP
26.	County Bureau of land resources	Certification of land rights	Certification of land rights issued by County Bureau of land resources in 1 District and 7 Counties dated in Sep. 2014	PP
27.	Representatives of community groups	Community Monitoring Questionnaires	110 valid questionnaires of Community Monitoring	PP
28.	Guizhou Xinzhanxin Agricultural Technology Co., Ltd..	Forest Management Manual	Forest Management Manual issued by Guizhou Xinzhanxin Agricultural Technology Co., Ltd.	PP
29.	Zunyi Forest Bureau	Standard deviation for project area	Standard deviation of the existing data related to the project area issued by the Zunyi Forest Bureau based on the results of years of forestry surveys	PP
30.	Local Forest Bureau and local Garden nursery company	Seedling Purchase Contract	Seedling Purchase Contract signed between Local Forest Bureau and local Garden nursery company dated in 2015, 2016 and 2017	PP
31.	Shanghai Libra Investment & Management Co., Ltd	Sample plots calculation sheet	Sample plots calculation sheet	Shanghai Libra Investment & Management Co., Ltd
32.	Shanghai Libra Investment & Management Co., Ltd	Sampling plots inventory	PP Sampling plots inventory of 40 samples	Shanghai Libra Investment & Management Co., Ltd
33.	Shanghai Libra Investment & Management Co., Ltd	Sampling plots selection records	Sampling plots selection records proved that the sampling plots are selected randomly by excel function	Shanghai Libra Investment & Management Co., Ltd
34.	Guizhou Forestry Investigation and Design Co., Ltd.	Project Lifetime evidence	Project Lifetime evidence issued by Guizhou Forestry Investigation and Design Co., Ltd.	PP
35.	PP	KML file of project area	KML file of project area submitted to VERRA	PP
36.	Project Owner	Labor Contract	Labor Contract of project staffs and person who planted trees and technicians	PP
37.	Project Owner	Periodical payroll	Periodical payroll to persons who planted trees and all the technicians	PP

38.	Local village committee in project area (landowner) and Project Owner	Land Use Agreement	Land Use Agreement signed by Local village committee in project area and Project proponent on 25/02/2015	PP
39.	PP	Letter of verification site meeting	Letter issued by project owner to the local forest bureaus to arrange the auditor verification site meeting and invited local stakeholders representative	PP
40.	Guizhou Forestry Investigation and Design Co., Ltd.	Map of project area	1. Map with land-use types and the boundaries of all the plots for identifying the project location and boundaries of the project 2. Separate KML file shows the correct project boundaries	PP
41.	PP	Monitoring Manual	Monitoring Manual created by PP in Jan. 2019	PP
42.	Project Owner	Technical Training Record	1. New employee training records including labor Law and worker's right training. 2. Technical Training Record dated in 2016, 2017 and 2018 and 2019 3. Training records of special trainings for the project monitoring by explaining the monitoring plan and measurement method to technicians	PP
43.	VERRA	Email of no public comments	Email from VERRA on 19/10/2020 confirmed No public comments were received for this project	PP
44.	UNFCCC	Afforestation and reforestation Methodology	AR-ACM0003 "Afforestation and reforestation of lands except wetlands", version 2.0.0	UNFCCC website
45.	UNFCCC	Methodological tool	Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities (Version 01.0)	UNFCCC website
46.	UNFCCC	Methodological tool	Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities, version 04.2	UNFCCC website
47.	UNFCCC	Methodological tool	Calculation of the number of sample plots for measurements within A/R CDM project activities, Version 02.1.0	UNFCCC website
48.	VCSA	Monitoring Report Template	CCB_VCS_Monitoring_Report_Template_CCBv3.0-_VCSv3.4	VCS website
49.	VCSA	AFOLU Non-Permanence Risk Tool, version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
50.	VCSA	VCS Program Definitions, Version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
51.	VCSA	VCS Program Guide, Version	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website

		4.0		
52.	VCSA	VCS Standard, Version 4.0	https://verra.org/project/vcs-program/rules-and-requirements/	VCS website
53.	VCSA	Verification Report Template	CCB_VCS_Verification_Report_Template_CCBv3.0_VCSv3.4	VCS website
54.	VCSA&CCBA	Project Development Process	"VCS+CCB Project Development Process" (version 3.0)	VCS website
55.	CCBA	CCB Program Rules, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
56.	CCBA	CCB Standard, version 3.1	https://verra.org/project/ccb-program/rules-requirements-and-guidance/	CCB website
57.	National Forest Bureau	Guidelines on carbon accounting and monitoring for afforestation project	LY/T 2253-2014 <Guidelines on carbon accounting and monitoring for afforestation project> issued by National Forest Bureau	Public Website
58.	Devices Manufacturer	Products Qualification	Products qualification for all the measuring devices	PP
59.	The State Council of China	Grain for Green Program	Grain for Green Program issued by the State Council of China	Public Website
60.	Ministry of environmental protection	Technical guidelines for biodiversity monitoring—terrestrial vascular plants	HJ 710.1-2014 "Technical guidelines for biodiversity monitoring—terrestrial vascular plants" issued by Ministry of environmental protection	Public Website
61.	International Union for Conservation of Nature	International Union for Conservation of Nature	The IUCN Red List Categories and Criteria (version 3.1)	PP
62.	Google	Google Earth	Google Earth Map	Public software
63.	Gold Standard Organization	Gold Standard	http://www.goldstandard.org/	Website
64.	IPCC	IPCC publications	www.ipcc-nggip.iges.or.jp	Website
65.	National Government	Laws related to forestry	<PRC Forest Law>, <PRC Forest Law Implementing Regulations>, <PRC Wildlife Protection Law>, <Forest Fire Prevention Regulations>, <Insect Control Regulation>, <PRC Production Safety Law>	Website
66.	Standing Committee of the National People's Congress of China	Labor Law	Labor Law of the People's Republic of China	National public website

67.	National System	National Enterprise Credit Information Publicity System	National Enterprise Credit Information Publicity System	National public website
68.	National Government	Administrative regulations related to forestry	<Regulations for Implementing the Forest Law>, the <Regulations for Grain for Green>, the <Regulations for the Protection of Wild Plants and Animals>, the <Regulation for Nature Reserve>, the <Regulation for Forest Fire Control>, and the <Regulation for Forest Diseases and Pests Control>	National public website
69.	UNFCCC	UNFCCC	http://cdm.unfccc.int	Website
70.	VCS	VCS	http://www.v-c-s.org/	Website
71.	Local government	Local Weather	http://www.Qiannan.gov.cn/	Website
72.	NDRC of China	Climate Change	The People's Republic of China Second National Communication on Climate Change, issued by NDRC, 2013	National public website

APPENDIX 3: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. Remaining FAR from validation and/or previous verification

FAR ID	N/A	Section no.	-	Date :	-
Description of FAR					
Project participant response					Date :
Documentation provided by project participant					
VVB assessment					Date:

Table 2. CL from this verification

CL ID	01	Section no.	2.2.1	Date :	02/10/2020
Description of CL					
1. The key dates and milestones after the draft MR finished are not listed in the schedule table. 2. No information on any community activities that took place during the monitoring period, clarification is requested.					
Project participant response					Date : 18/10/2020
1. The key dates and milestones after the draft MR finished are not listed in the schedule table. 2. This question have been clarification as requested, key dates and milestones of community meetings, and survey implementation are added accordingly.					
Documentation provided by project participant					
/1/					
VVB assessment					Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that key dates and milestones after the registration, like, monitoring survey, MR GSC, site verification, etc. have all been listed and the dates are confirmed as correct. 2. The revised MR is checked, CTI confirmed that key dates and milestones of community meetings and survey implementation have all been listed and the dates are confirmed as correct.					
CL 01 is closed.					

CL ID	02	Section no.	2.3.1	Date :	02/10/2020
Description of CL					
The actual information of stakeholder access to project documents process is not specified.					
Project participant response					Date : 18/10/2020
The on-site verification and Stakeholder interviews were held in Tongzi County on 30-September-2020. Stakeholder meetings in the project areas were organized locally by the Zunyi Forestry Bureau through inviting villagers in each region, attended by technicians, tree planting workers, local villagers, representatives of forestry bureau and project leaders of Shanghai Libra Investment & Management Co., Ltd. At that time, questionnaires were sent to them to understand the situation during the project verification. The questionnaires were handed out for their opinion and suggestions, at the same time explained the content of monitoring and provided monitoring documents.					
Documentation provided by project participant					
/1/					
/22/					
VVB assessment					Date: 20/10/2020

The full project documentation has been published on VCS and CCB website (<https://www.vcsprojectdatabase.org/#/ccb-pipeline>) as well as the project summary in Chinese version so that the local communities and other stakeholders can easily download from the website. The project periodic development has been published on the notice board of 169 villages involved in the project, including PD, monitoring manual and monitoring plan, at the same time, the contact persons' information was also announced. If there is any negative feedback, a meeting will be immediately held in the village. The revised MR is checked, CTI confirmed that the time and location of the MR published to local stakeholders is added. The project implementer published the monitoring plan and monitoring manual on the local notice boards to explain the monitoring process to communities and other stakeholders which has been verified by checking the photo of the communities and stakeholders watching/22/. The actual information of MR GSC in the CCB and VCS website is added, the monitoring results, monitoring plan and summary of the monitoring plan in local language, have been made publicly available on the CCB website (<https://registry.terra.org/app/projectDetail/CCB/2082>), which can be downloaded by stakeholders. The actual information of the auditor site verification stakeholders' meeting is added, during the on-site verification, stakeholder meeting with the villagers, local officers, technicians and stakeholders have been carried out on in September, 2020. Refer to section 4.3.4 of this report for details assessment. CL 02 is closed.

CL ID	03	Section no.	2.3.2&2.3.3&2.3.4	Date : 02/10/2020
Description of CL				
1. Actual information of dissemination of Summary Project Documents is not clarified in 2.3.2.				
2. Actual situation of Informational Meetings with Stakeholders is not clarified in 2.3.3.				
3. The stakeholders' meeting date in 2.3.3 is not correct.				
4. Actual information of how the PP explained Community Costs, Risks, and Benefits during this monitoring period is not specified in 2.3.4.				
5. The explanation of what is meant by natural disasters is not provided.				
Project participant response				Date : 18/10/2020
1. Actual information of dissemination of Summary Project Documents have been clarified in 2.3.2.				
2. Actual situation of Informational Meetings with Stakeholders have been clarified in 2.3.3.				
3. The stakeholders' meeting date in 2.3.3 has been revised correctly.				
4. Actual information of how the PP explained Community Costs, Risks, and Benefits during this monitoring period have been specified in 2.3.4.				
5. This part has been modified accordingly.				
Documentation provided by project participant				
/1/				
VVB assessment				Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that the actual information of dissemination of Summary Project Documents added into the section 2.3.2.				
2. The revised MR is checked, CTI confirmed that the actual situation of Informational Meetings with Stakeholders added into the section 2.3.3.				
3. The revised MR is checked, CTI confirmed that the date is correct and actual.				
4. The revised MR is checked, CTI confirmed that the actual information of how the PP explained Community Costs, Risks, and Benefits during this monitoring period. By on-site checking interview with the local stakeholders/12/,/13/, CTI verified that they understand the explanation of the Costs, Risks, and Benefits.				
5. The revised MR is checked, CTI confirmed that the nature disaster has been explained, which is confirmed as actual and correct.				
Refer to section 4.3.4 of this report for details assessment.				
CL 03 is closed.				

CL ID	04	Section no.	2.3.5	Date	02/10/2020
Description of CL					
The detail information to stakeholder on verification process is not clarified.					
Project participant response				Date : 18/10/2020	

The status and process of the project for CCB and VCS verification has been published through routine villager assembly and posted on every 169 village notice boards before 27-September-2020 when the on-site verification began. On the other hand when project proponent and Shanghai libra have known the on-site visit time, the technicians would begin notice the villagers from door to door. The mobile phone number of contact person of the project was published on the meeting notice so the villagers can directly make a call in case they have any problem about the project

Documentation provided by project participant

/1/
/22/
/39/
/23/

VVB assessment

Date: 20/10/2020

The revised MR is checked, CTI confirmed that the actual information to stakeholder on verification process is specified.

During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out on 27-September-2020 through audit meeting interview with local stakeholders by auditor. By on-site checking the photo/22/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 169 villages of the 1 district and 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/39/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders/23/.

Therefore, CTI concluded that the method for dissemination of project information, especially to local communities, appears to be effective.

CL 04 is closed.

CL ID	05	Section no.	2.3.6	Date : 02/10/2020
Description of CL				
The information of Site Visit and Opportunities to Communicate with Auditor is not clarified.				
Project participant response				Date : 18/10/2020
The auditor surveyed the site plots and forests of the project from 27-September-2020 to 30-September-2020. The project proponent arranged a stakeholder meeting with the auditor on 27-September-2020, technicians, tree planting workers, local villagers, representatives of forestry bureau, county government, and project leaders of Shanghai Libra Investment & Management Co., Ltd and Guizhou Xinzhanxin Agricultural Technology Co., Ltd. to verify the project status. During the meeting, everyone spoke freely. Each of the participants represented their feelings and experience to the auditor about the project. Auditor also asked the villagers whether the implementation of the project had a significant impact on their lives and whether they had any complaints. The villagers paid more attention to about how to quantify the amount of emission reduction produced by trees. They raised relevant questions about how the emission reduction was calculated and how the height and diameter of trees were measured. The project proponent and auditor provided detailed answers to stakeholders representatives for all the questions. After the meeting, the auditor interviewed each participant separately and asked for their opinions and suggestions. The villagers have all expressed a willingness to continue to participate in the project, not only because of the lasting employment opportunities that have been created for local rural communities but also have increased their incomes and improved living conditions. Officials made clear their support for the project implementation.				
Documentation provided by project participant				
/1/ /22/ /39/ /23/				
VVB assessment				Date: 20/10/2020

The revised MR is checked, CTI confirmed that the actual information of the Site Visit and Opportunities to Communicate with Auditor is added. During the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out on 27-September-2020 through audit meeting interview with local stakeholders by auditor. By on-site checking the photo/22/, CTI confirmed by the verification team that the monitoring plan and monitoring manual were published in the notice boards for each of the 169 villages of the 1 district and 7 counties before the site visit time. And by checking the letter issued by project owner to the local forest bureau/39/ and on-site observation, CTI verified that the local forest bureau received letter and considered the importance of inviting the local stakeholder comments. During the meeting, project implementer introduced the monitoring results during this monitoring period and copies of monitoring report is available to anyone requests it. Verification team has participated and interview the stakeholders separately to access their real thought of the project, and the results are also verified by checking the meeting minute and questionnaires filled by stakeholders/23/. CL 05 is closed.

CL ID	06	Section no.	2.3.7	Date : 02/10/2020
Description of CL				
Description of how Stakeholder Consultation conducted in this monitoring period for all community groups and other stakeholders is not clarified.				
Project participant response				Date : 18/10/2020
The on-site verification was from 27-September-2020 to 30-September-2020 and Stakeholder interviews were held in Tongzi County on 27-September-2020. Stakeholder meetings in the project areas were organized locally by the Zunyi Forestry Bureau through inviting villagers in each region, attended by technicians, tree planting workers, local villagers, representatives of forestry bureau and project leaders of Shanghai Libra Investment & Management Co., Ltd. At that time, questionnaires were sent to them to understand the situation during the project verification.				
Documentation provided by project participant				
/1/ /27/				
VVB assessment				Date: 20/10/2020
Before the project started, the stakeholder input on project implementation has been documented though meeting minutes and questionnaires as stated in PD. Furthermore, during this monitoring period, the stakeholder input on project implementation have been monitored through in-person meetings and questionnaires survey conducted from October to November in 2019 which has been confirmed by checking the 110 filled questionnaires ^{/27/} collected during this period and cross verified by on-site interview with the local stakeholders ^{/12/,/13/} . In addition, during the on-site verification, stakeholder meetings with the villagers, local officers, technicians and stakeholders have been carried out on 27-September-2020 through audit meeting interview with local stakeholders by auditor. During the meeting, project implementer introduced the monitoring results during this monitoring period and the comments from all the stakeholders have been documented as meeting minute. Via checking all the documents, CTI verified that there is no grievances and negative comments received during this monitoring period, which has been also confirmed during the stakeholder meetings in verification process.				
CL 06 is closed.				

Table 2. CAR from this verification

CAR ID	01	Section no.	2.1.1	Date : 02/10/2020
Description of CAR				
The values of GHG emissions reduction generated during this monitoring period and average annual value in 2.1.1 are not correct.				
Project participant response				Date : 18/10/2020
The values of GHG emissions reduction generated during this monitoring period and average annual value in 2.1.1 is updated consistent with other parts.				
Documentation provided by project participant				
/1/				
VVB assessment				Date: 20/10/2020

The revised MR is checked, CTI confirmed that the values are corrected to be consistent with the other parts of the MR and the ER sheet.
CAR 01 is closed.

CAR ID	02	Section no.	2.1.7	Date :	02/10/2020
Description of CAR					
The map in section 2.1.7 is not complete, the project zone is not provided clearly.					
Project participant response					Date : 18/10/2020
The map of the project zone is added in section 2.1.7.					
Documentation provided by project participant					
/1/ /40/					
VVB assessment					Date: 20/10/2020
The revised MR is checked, CTI confirmed that the map in section 2.1.7 is complete, the project zone is clearly shown in the Map which is confirmed by checking the Map of project/40/.					

CAR ID	03	Section no.	2.3.10	Date :	02/10/2020
Description of CAR					
The information of local stakeholders attended the stakeholders' meeting is not provided clearly and the time period for questionnaire survey is not correct.					
Project participant response					Date : 18/10/2020
The below information is added: On 20 September 2019, 40 villagers, village committee, forest bureau and government representatives from 25 villages were organized by the project proponent and the forestry bureau of Zunyi to attend the stakeholders' meeting at the forestry bureau of Zunyi City, in order to prepare for the project verification and collect the views of stakeholders before the project verification.					
Documentation provided by project participant					
/1/ /21/					
VVB assessment					Date: 20/10/2020
During the project implementation, local consultations, community monitoring, dissemination of project and monitoring information are taken. The identified stakeholders are local government and villagers located in surrounding villages. Representatives of stakeholders covering different locations in project zone, different age, gender and culture background have been distributed by questionnaires and all the feedback are considered by project owner for changing the project implementation if necessary. Via checking all the questionnaires/21/ and by interview with the representatives/12/,/13/ during site visit, CTI confirmed that all the participants agreed the project implementation and they confirmed they have effectively participated and involved in project implementation, monitoring, and evaluation by communication with project owner, noticed by village notice boards and asked to fill the related questionnaires. Therefore, from that point, the project monitoring was not modified. Due the nature of stakeholders identified and the actions taken by the project owner for their involvement can confirm the project enabled community participation in project implementation. Furthermore, via on-site interview with the local women stakeholders and technicians, CTI verified that they are encouraged by PP to participate the working, stakeholder meeting and maintaining the regular communications with Sorority Director and Nationalities Officer of local counties. Thus the culture- and gender-sensitivity of implementation of such actions has been demonstrated. CAR 03 is closed.					

CAR ID	04	Section no.	3.1.2	Date :	02/10/2020
Description of CAR					

1. For parameter $V_{TREE,j}$, $V_{TREE,l,p,j,i}$, the values for proj-10 is not correctly calculated based on the supporting evidence in both MR and ER sheet and the related sample plot ID is missing for all the Project Stratifications. 2. For parameter $V_{TREE,j}$, $V_{TREE,l,p,j,i}$, the formular to calculate the $V_{TREE,j}$ of China fir is not consistent with the ER sheet and supporting evidence. 3. For parameter n_i, the actual numbers of sample plots for each strata is not listed. 4. For parameter u_c, the value is not correct. 5. For parameter b_{TREE}, the value is not correct.	
Project participant response	Date : 18/10/2020
1. For parameter $V_{TREE,j}$, $V_{TREE,l,p,j,i}$, the values for proj-10 has been corrected calculated based on the supported evidence in both MR and ER sheet and the related sample plot ID has been added for all the Project Stratifications. 2. For parameter $V_{TREE,j}$, $V_{TREE,l,p,j,i}$, the formular to calculate the $V_{TREE,j}$ of China fir has been corrected consistent with the ER sheet and supporting evidence. 3. For parameter n_i, the actual numbers of sample plots for each strata has been listed. 4. For parameter u_c, the value has been corrected. 5. For parameter b_{TREE}, the value has been corrected.	
Documentation provided by project participant	
/1/	
VVB assessment	Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that the revision is correct. 2. The revised MR is checked, CTI confirmed that the revision is conducted, the formular to calculate the $V_{TREE,j}$ of China fir is consistent with the ER sheet and supporting evidence. 3. The revised MR is checked, CTI confirmed the actual number of sample plots for each strata is correctly listed. 4. The revised MR is checked, CTI confirmed that the value of u_c is revised to be correct and consistent with ER sheet. 5. The revised MR is checked, CTI confirmed that the value of b_{TREE} is revised to be correct and consistent with ER sheet. All the related part in MR has been updated in line with the correction request. Refer to section 4.4.1 of this report for detailed assessment. CAR 04 is closed.	

CAR ID	05	Section no.	3.1.3	Date : 02/10/2020
Description of CAR				
1. For the monitoring of applicability of methodology, the calculation result of soil disturbance area ratio is not correct due to the afforestation density was not 3,100 plant/Ha (derived from the registered PD) during this monitoring period. 2. The total number of plots in this project is not correct. 3. The detail information of the sample plots including ID number, geographical coordinates, tree species, planting year is missing. 4. A map with sample plots location is missing.				
Project participant response				Date : 18/10/2020
1. The value of afforestation density was revised to the actual value during this monitoring period and the calculation result of soil disturbance area ratio is recalculated in PD. 2. It is a typo. 170 has been changed to 169 which is correct. 3. The detail information of the sample plots including number, geographical coordinates, tree species, number of trees has been added. 4. A map with sample plots location has been added.				
Documentation provided by project participant				
/1/				
/8/				
/32/				
VVB assessment				Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that the re-calculation of soil disturbance area ratio is				

correct based on the actual afforestation density during this monitoring period.
2. The revised MR is checked, CTI confirmed that the typo mistake has been revised. The actual number of plots in 10 strata is confirmed as 169 by checking the project design/8/.
3. The revised MR is checked, CTI confirmed that the detail information of the sample plots including number, geographical coordinates, tree species, number of trees has been listed which verified as correct by checking the sampling plots inventory/32/.
4. The revised MR is checked, CTI confirmed that a map with sample plots location is added. The location is confirmed as correct by checking the sampling plots inventory/32/ comparing with the google earth map.
CAR 05 is closed.

CAR ID	06	Section no.	3.2.2	Date : 02/10/2020
Description of CAR				
1. The values of $b_{tree,p,i}$ for strata 10 are not correct.				
2. The values of si^2 and S^2_{bTREE} are not correct for strata 10, thus the result of u_c is not correct.				
3. The allometric equation used for China fir is not correct with the ER sheet.				
4. The ER calculation results are not correct.				
Project participant response				Date : 18/10/2020
1. The values of $b_{tree,p,i}$ have been modified correctly.				
2. The values of si^2 and S^2_{bTREE} are revised to be correct, thus the result of u_c have been modified accordingly.				
3. It is a typo mistake and has been revised in the MR.				
4. The ER calculation results have been modified correctly.				
Documentation provided by project participant				
/1/				
/3/				
VVB assessment				Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that the revision is correct.				
2. The revised MR is checked, CTI confirmed that the revision is correct.				
3. The revised MR is checked, CTI confirmed that the revision is correct.				
4. The revised MR is checked, CTI confirmed that the revision is correct.				
All the related part in MR has been updated in line with the correction request.				
Refer to section 4.4.1 of this report for detailed assessment.				
CAR 06 is closed.				

CAR ID	07	Section no.	4.1.1	Date : 02/10/2020
Description of CAR				
In Section 4.1.1, how the impacts on the community achieved during this monitoring period is not described.				
Project participant response				Date : 18/10/2020
In Section 4.1.1, how the impacts on the community achieved during this monitoring period has been described. Refer to tables in 4.1.1 for details.				
Documentation provided by project participant				
/1/				
/42/				
/37/				
/36/				
VVB assessment				Date: 20/10/2020
The revised MR is checked, it is confirmed that the actual impacts on the community achieved during this monitoring period have been provided.				
The MR states that the project generated positive community impacts during this monitoring period through improve living environment, increasing household income, prevention of deteriorating living conditions and climatic relocations with less and less villagers are forced to move out of their homes so that to provide actual and direct benefits to community group-local villagers including women, and increased the collective cohesion of the village and improve the working methods of the villagers so that				

to provide actual direct benefits to community group-village committees in project area, also achieve goals in afforestation and increase forest cover, promote forest management and protection, and need more time for training and forest management to beneficial to the local forest bureaus, and improve the local ecological environment and improve people's living level to beneficial to the local governments. These impacts are confirmed include all those identified in the project description/6/. The analysis of the net benefits to the community groups is conducted to each category of community groups as identified in the PD/6/. Each benefit has been verified by checking the labor contracts/36/, periodical payroll/37/, training records/42/ during this monitoring period and on-site observation and interview with local officers/12/, residents/13/, workers/13/ and women/13/. CAR 07 is closed.

CAR ID	08	Section no.	4.3.1	Date : 02/10/2020
Description of CAR				
1. The actual information from questionnaires during this monitoring period is not specified completely in the description. Not all the groups and impacts as listed in section 4.1.1 are stated. 2. The monitoring methods to be applied for key variables monitored for this monitoring period are not stated specially for this monitoring period.				
Project participant response				Date : 18/10/2020
1. All the groups and impacts as listed in section 4.1.1 has been updated in 4.3.1. 2. The monitoring methods to be applied for key variables monitored for this monitoring period has been updated.				
Documentation provided by project participant				
/1/				
VVB assessment				Date: 20/10/2020
1. The revised MR is checked, CTI confirmed that the actual information from questionnaires during this monitoring period is specified completely in the description, all the groups and impacts as listed. 2. The revised MR is checked, CTI confirmed that the monitoring methods to be applied for key variables monitored for this monitoring period are stated specially and relevant to this monitoring period. Refer to section 4.5.6 of this report for detail assessment. CAR 08 is closed.				

CAR ID	09	Section no.	5.1.3	Date : 02/10/2020
Description of CAR				
The globally endangered species according to IUCN is not same to the PD.				
Project participant response				Date : 18/10/2020
This is a typo mistake in the PD, globally endangered species is revised according to IUCN in the PD.				
Documentation provided by project participant				
/1/				
VVB assessment				Date: 20/10/2020
The revised MR is checked, CTI confirmed that the name of globally endangered species is revised according to IUCN in the PD. CAR 09 is closed.				

CAR ID	10	Section no.	5.3.1	Date : 02/10/2020
Description of CAR				
The detail information of sample spots is not provided.				
Project participant response				Date : 18/10/2020
A table of information of sample spots is added into the MR.				
Documentation provided by project participant				
/1/				
VVB assessment				Date: 20/10/2020

The revised MR is checked, CTI verified that the information of sample spots is correct with the section 3 of the MR.
CAR 10 is closed.